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ABSTRACT

A national survey of parents of school aged Asian, Puerto Rican, Mexican American, and Cuban students was conducted to examine what educational preferences language minority parents have regarding the role of English and non-English (home) language in the instructional process. A second purpose of the survey was to determine what factors are associated with parents' choices. The survey contained four general areas of inquiry, including: (1) items relating to parents' perceptions of, and attitudes toward, school programs and practices; (2) items relating to parents' general aspirations for their children and those related specifically to education and language learning; (3) items related to language use and to parent involvement in their children's schooling; and (4) parent demographic characteristics. Survey findings established that parents support bilingual education in its most generic sense--giving extra help to students in order to facilitate their learning English--but generally do not go much beyond that in differentiating among types of bilingual programs. Although there were large and pervasive differences among the ethnic groups in terms of the level of their support for certain instructional strategies, parents did support special language programs for language minority children. Contains 35 references. (GLR)

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PARENT PREFERENCE STUDY

Joan Baratz-Snowden
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U.S. DEPARTMENT OF EDUCATION
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Final Report
July 1988

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EXECUTIVE SUMMARY

How best to educate the growing population of language minority children has been a subject of considerable policy debate at the federal, state and local level. Although this debate has been fueled by a wide range of opinion from the public, educators, and special interest advocates as to appropriate instructional programs and services for language minority youngsters, little direct information relating to parent attitudes and preferences is available to inform the policy process.

Education in the United States has traditionally been viewed as a partnership between the schools and parents. Underlying this notion of the school as "in loco parentis" is the assumption of a shared value system of parents and educators concerning the needs of children and the role and responsibility of the school. As American society has become more diverse, it has become evident that not enough is known about the educational desires and preferences of the parents of language minority children, particularly as those preferences relate to language instructional practices.

To that end, a national survey of parents of school aged Asian, Puerto Rican, Mexican American and Cuban students was conducted to examine what educational preferences language minority parents have regarding the role of English and non-English (home) language in the instructional process. A second purpose of the survey was to determine what factors are associated with the various preferences that parents choose.

The survey sample was derived from two sources. The first source was a national sample of parents of Asian, Puerto Rican and Mexican American students in grades three, seven and eleven. Those students had participated in a special study of language minority students conducted as part of the National Assessment of Educational Progress (NAEP). The second source was a supplementary telephone sample of Puerto Rican and Cuban parents of language minority elementary, middle school and high school students in two large metropolitan areas. This is a study of parents of language minority children, not primarily a survey of the preferences of parents of limited English proficient children. Only a small percentage of the parents in the sample had children whom they and/or personnel in the school deemed to be so limited in English that they could not benefit from instruction in English.

The survey instrument contained four general areas of inquiry: items relating to parents' perceptions of, and attitudes toward, school programs and practices; items relating to parents' general aspirations for their children and those related specifically to education and

language learning; items related to language use and to parent involvement in their children's schooling; and parent demographic characteristics.

Summary of Descriptive Findings

Because the Asian, Mexican American and some of the Puerto Rican parents were selected from a national sampling frame and the Cuban parents and additional Puerto Rican parents were selected from metropolitan areas, the samples may not be combined. Nevertheless, the results across groups were so consistent that in spite of the sampling anomaly comparisons can be made.

There were considerable demographic and language competency differences among the various groups:

- o Asian and Cuban parents are more likely to be born outside the United States than Mexican American and Puerto Rican respondents. Asian and Cuban parents also tend to report more education and higher family income than the other groups, with Asians being the most likely to hold advanced degrees and Puerto Ricans and Mexican American parents the most likely not to have graduated from high school.

- o Parent assessments of their competency in English -- speaking, understanding, reading and writing -- and of their non-English language literacy skills are commensurate with the differentials in their education levels. While a third of the parents judge themselves as very competent in English, Mexican American parents are more likely than all groups to report no competence in English. Similarly, three quarters of the Asian and Cuban parents indicated a high degree of literacy in their non-English language, whereas closer to 50% of the Mexican American and Puerto Rican parents so rated themselves, and 20& of the Mexican American parents indicated that they were illiterate in Spanish.

- o The vast majority of parents (more than 85%) rated their children as being very good or pretty good in English skills, e.g. speaking, understanding, reading and writing English, but with the exception of Cuban parents, less than 40% of the parents rated their children's skills in their non-English language as very good or pretty good, and more than a quarter of the Asians rated their children's abilities in the non-English language as "not at all".

Despite dissimilarities in background characteristics, the parents show many similarities in educational goals for their children. Often the differences are more in degree than in substance.

- o All parents first and foremost want their children to achieve in school and learn English, although Asians are significantly more likely to mention learning English as one of the three most

important objectives of schooling. They are less likely than Mexican American and Cuban parents to mention teaching the non-English language as a high priority for schools.

o Asian and Hispanic parents all overwhelmingly agree on the responsibility of the school to teach children English language skills, but Asians are less likely than the Hispanic groups to hold the schools responsible for teaching children to speak, read and write their non-English language.

o While a large majority of parents believe that it is the family's responsibility to teach children about the history and tradition of their ancestors, Puerto Rican and Mexican American parents were more likely than Cuban and Asian parents to assign that task to schools.

In terms of preferences for special language programs and instruction in the non-English language, we find:

o Generally Asians are less enthusiastic than Hispanics for the use of non-English in instruction. In reading and writing instruction for students who use a non-English language at home, Asians are more in favor of the use of English than are Hispanic parents. And in instructing those students in the basics, such as science and math, Asian parents are more likely to desire English than other Hispanic groups, with the exception of Cuban parents.

o The majority of parents felt that students who spoke a language other than English at home should get special help. When presented with a description of either a bilingual maintenance, transitional bilingual or immersion language program, Asians were more enthusiastic about immersion programs than about maintenance or transitional programs. They were also less enthusiastic about maintenance programs than were the other Hispanic parents with the exception of Cubans.

o Asians students are much less likely than Hispanic students to attend schools where their home language is used. There are no differences in the likelihood of Spanish being used in the schools that Mexican American, Puerto Rican or Cuban youngsters attend.
o Of language minority students currently enrolled in a special program, immersion programs were most readily available to Asian students. There were not such apparent differences for the Hispanic students.

Summary of The Relational Analysis Results

The most striking finding of the relational analysis was the consistent and, compared to all other variables used in the analysis, overwhelming role of ethnicity in association with parent preferences.

o In regard to the importance of their child's learning the home language, Hispanic parents were more likely than Asian parents to desire this outcome, with one exception, Mexican American parents of high school students.

o In regard to the use of the non-English language in teaching basic subjects such as math and science, Puerto Rican and Mexican American parents were more likely to desire this outcome than Asian parents.

o In regard to the use of the non-English home language for teaching English reading and writing skills, all Hispanic groups were more likely to desire this instructional strategy than were Asian parents.

o In addition to parent preferences the relational analysis looked at factors related to achievement. The results indicate that in addition to ethnicity, parents' assessments of their child's proficiency in reading and writing English were related to grades in school and tested achievement. Ratings of children's proficiency in reading and writing the home language also had a significant positive effect on grades in school. While language skill was important to achievement, whether or not the student had ever been taught in a non-English language was not.

Surprisingly, when we control for the other variables used in this study, such as, 1. education level, 2. family income, 3. parent or child language skills or language use, 4. children's experience with special language programs and 5. achievement, we find that the pattern of association between ethnic difference and parental preference for the use of the home language in instruction remains. In addition, none of those other variables appeared to have a strong relationship with parental preference when ethnicity is taken into account. These findings were replicated when we looked at preferences for types of programs and background characteristics and attitudes towards the importance for children to know and retain the non-English language and the customs of their ancestors.

There were some significant relationships between some of these other background and process variables on intermediate outcomes, but even on those outcomes the ethnic differences tended to predominate.

Although there are differences in degree depending on the program or the instructional strategy, the results of this study clearly indicate that all groups -- Asians, Cubans, Puerto Ricans and Mexican Americans -- support efforts at providing special language services to students who come from homes where a non-English language is spoken. Regardless of parent attitudes towards the importance of their child speaking the home language well, or their perception of the role of the school in teaching the non-English language, <u>all</u> parents assign high importance to their children learning English.

Conclusions

Although there are differences in degree depending on the program or the instructional strategy, the results of this study clearly indicate that all groups -- Asians, Cubans, Puerto Ricans and Mexican Americans -- support efforts at providing special language services to students who come from homes where a non-English language is spoken. Regardless of parent attitudes towards the importance of their child speaking the home language well, or their perception of the role of the school in teaching the non-English language, <u>all</u> parents assign high importance to their children learning English.

Parents support bilingual education in its most generic sense -- giving extra help to students in order to facilitate their learning English -- but generally do not go much beyond that in differentiating among types of bilingual programs. It would appear from the parents' perspective the most important issue is that language minority children learn English and that such children be given the necessary special services, whatever kind, to achieve that end. The need for special services, not the particulars of the educationists' debate concerning the <u>best</u> type of bilingual program for learning English, seems to motivate their opinions.

The data indicate large and pervasive differences among the ethnic groups in terms of the level of their support for certain instructional strategies even after demographic and other background and process factors have been controlled. Asian parents are generally less enthusiastic than Hispanic parents concerning the use of their non-English language in their children's schooling. Even though more than 50% of the Asian parents supported maintenance or transitional bilingual education programs, they are less likely than Mexican American and Puerto Rican parents to find a maintenance or transitional bilingual program attractive as an approach to teaching children who don't speak English. Furthermore, Asian parents are more predisposed to immersion programs for non-English speaking children than they are to other kinds of bilingual programs.

Limitations in the data set, particularly in regard to the fact that many parents were unable to specify language policies and practices in their children's schools, caution against overgeneralizing such findings. However, the results concerning parent opinion about bilingual programs have the two clear policy implications. First, parents believe that special language programs should be available for language minority children. Asian, Mexican American, Puerto Rican and Cuban parents are all very much in favor of some kind of special language services for students who don't speak English.

Second, while parents support the needs for special language programs for language minority children, there is a diversity of opinion both within and among ethnic groups as to what are the most desirable instructional practices. Thus, to the extent that schools attend to parent preferences in their program development, it would appear that this study would call for some options in the types of special services available to language minority children.

TABLE OF CONTENTS

	Page
Executive Summary	i
Table of Contents	vi
Table of Tables	viii
Chapter I: INTRODUCTION	1
Purpose	2
Organization of this Report	3
Chapter II: LITERATURE REVIEW	4
Heterogeneity of Ethnic Groups and Preferences Related to Schooling	5
Survey Research on Attitudes towards Bilingual Education	9
Summary of Literature Review	13
Chapter III: METHODOLOGY	15
Sample Design	15
Questionnaire Content	20
Variables Used in this Study	20
Survey Implementation	26
Limitations of the Data	27
Chapter IV: DESCRIPTIVE FINDINGS	29
Demographic Information	29
Language Variables	36
Children's Experiences with Language Minority Services	40
Educational Outcomes	47

Parental Preferences 50

Summary of Descriptive Findings 62

Chapter V: RELATIONAL ANALYSIS 65

Relational Analysis Plan 70

Results 73

Home Educational Support Variables 75

Child's Language Competency 84

Bilingual School Experiences 91

Achievement in School 95

Language and Instructional Preferences of Parents . . 99

Summary of the Relational Analysis Results 107

Chapter VI: DISCUSSION AND CONCLUSIONS 109

References 113

Appendices

A. Sample Design and Weights
B. Survey Instrument and Table of Intercorrelations of Variables Used in this Study
C. Tables of Hispanic Group Contrasts

TABLE OF TABLES

	Title	Page
Table 1 -	Parent Preference Sample by Age of Child	19
Table 2 -	Language in which Interview was Conducted.	26
Table 3 -	Place of Birth of Parents and their Children	30
Table 4 -	Years Parent Has Lived in US	31
Table 5 -	Parents' Education	31
Table 6 -	Parents' Occupation	32
Table 7 -	Parents' Income	33
Table 8 -	Parent's Use of English and Non-English Language	37
Table 9 -	Parent's Competence in English and Literacy in Non-English Language	38
Table 10 -	Parent's Ratings of Their Children's Language Competence	40
Table 11 -	School Policy on Use of Non-English Language	41
Table 12 -	Do Teachers Speak Your Child's Non-English Language?	42
Table 13 -	Children's Experiences with Special Language Services	44
Table 14 -	Is Child in Bilingual, Transitional or Immersion Program?	46
Table 15 -	What are the Three Most Important Things You Want Your Child to Learn at School?	48
Table 16 -	How Important is for Your Child to Speak English and Non-English Language Well?	49
Table 17 -	Should Schools Teach All Children a Non-English Language?	50
Table 18 -	Should Non-English Speaking Children be Given Extra Help?	51
Table 19 -	Do you Think Teaching in Non-English Language Interferes with Learning English?	52
Table 20 -	Should Schools Teach Math and Science in Non-English Language If It Means Children Will Learn Those Subjects Better?	52
Table 21 -	Should Schools Teach Language Minority Children a Non-English Language If It Means Less Time For Teaching Them Other Subjects?	54

Table 22 - Parents' Opinions of Bilingual, Transitional and Immersion Programs 57
Table 23 - Parents' Opinions of Bilingual, Transitional and Immersion Programs (For their child) 58
Table 24 - In What Language Should Non-English Student Be Taught? 59
Table 25 - Who Has The Main Responsibility for Teaching Children? 61
Table 26 - Was Child Read to Before Starting School? . 77
Table 27 - How Often do you ask Child about Schoolwork? 78
Table 28 - Media in Home 80
Table 29 - Importance of Child Learning to Speak Other Language? 81
Table 30 - How Important for Retain Customs. 83
Table 31 - Child Read/Write English (Composite). . . . 85
Table 32 - Child Read/Write Other (Composite). 87
Table 33 - Child Speak/Understand English (Composite). 89
Table 34 - Child Speak/Understand Other (Composite). . 90
Table 35 - Do any of Child's Teachers Speak Non-English Language? 92
Table 36 - Child Ever Taught in Non-Language At School? 94
Table 37 - Child's Grades During the Last School Year. 96
Table 38 - NAEP Math Achievement 98
Table 39 - Language Preference for Teaching Basics . . 100
Table 40 - Language Preference for Reading and Writing 102
Table 41 - Is This a Good Program form LM Children? . 104
Table 42 - Percent of Parent Preference for their Child to Receive Special Program by Parent Reports of Child's Competency in Reading/ Writing English. 106

TABLE OF FIGURES

Figure 1 - Parent Preference Path Analysis Model . . . 67
Figure 2 - Variables Used in Path Analyses 69
Figure 3 - Parent Program Preference Model 72

CHAPTER ONE -- INTRODUCTION

How best to educate the growing population of language minority children has been a subject of considerable policy debate at the federal, state and local level. Although this debate has been fueled by a wide range of opinion from the public, educators, and special interest advocates as to appropriate instructional programs and services for language minority youngsters, little direct information relating to parent attitudes and preferences is available to inform the policy process.

Lack of information about parent preferences is a serious problem. Both theories of language development and empirical data support the common sense notion that the process by which language minority children learn English can be enhanced by parental attitudes and behavior that complement the goals and methods of diverse bilingual instructional and ESL programs, or be hindered by inconsistent behavior, conflicting values, and lack of communication between home and school. The importance of parental understanding of, and support for, their children's educational programs has long been recognized as a significant factor in student achievement (Mayeske, 1973; Laosa 1975 and 1984; Guthrie, 1985; Rivera, 1984).

Indeed, education in the United States has traditionally been viewed as a partnership between the schools and parents. Underlying this notion of the school as "in loco parentis" is the assumption of a shared value system of parents and educators concerning the needs of

children and the role and responsibility of the school. As American society has become more diverse, it has become evident that not enough is known about the educational desires and preferences of the parents of language minority children, particularly as those preferences relate to language instructional practices.

Purpose

To that end, the purpose of this study is to examine what educational preferences language minority parents have regarding the role of English and non-English (home) language in the instructional process, and to determine what factors are associated with the various preferences that parents choose. In particular, we address the following questions:

- What are the demographic characteristics, language competencies, and school related experiences of parents of Asian, Mexican American, Puerto Rican and Cuban children who come from homes where a language other than English is spoken?

- What are the important educational outcomes they desire for their children, especially in regard to language skills?

- What are these parents' preferences in regard to the use of the home language in school? In particular, what are their preferences towards bilingual, transitional and immersion programs?

- What background, home educational support and language factors are associated with the program and instructional preferences of parents?

Organization of this Report

Following this introduction, Chapter Two presents a brief review of the literature on parental preferences regarding bilingual education. Chapter Three describes the methodology used in this study and the limitations of the data. The fourth chapter presents the descriptive findings. Chapter Five contains the relational analysis. Finally, Chapter Six presents our discussion and the policy implications relevant to the findings.

CHAPTER TWO --LITERATURE REVIEW

Bilingual education is an emotionally loaded word. It means different things to different people. As Stein (1986) has pointed out, bilingual education not only has denotative meanings in terms of education --"an instructional method, a means of teaching English proficiency, a dropout prevention technique and a way to stimulate foreign language learning" (p. ix), but it also carries considerable political connotative baggage relating to "immigration, official language policy, the future of the melting pot, demographic changes and ethnocentrism" (p. ix).

Language is both extremely personal and a means of establishing group identity. Attitudes about language preference are likely to be influenced by the belief individuals have about society and the role that language plays in establishing group identity or group difference. Indeed, as Fishman (1966) points out

> ...two processes -- de-ethnization and Americanization, on the one hand, and cultural-linguistic self-maintenance, on the other -- are equally ubiquitous throughout all of American history. They are neither necessarily opposite sides of the same coin nor conflicting processes. Frequently the same individuals and groups have been simultaneously devoted to both in different domains of behavior. However, as a nation, we have paid infinitely more attention to the Americanization process than to the self-maintenance process. (p.15)

Belief systems about language and the role language use plays in the economic, educational and political well being of the individual

and/or the society have been found to be associated with language preferences (Heath, 1983; Padilla, 1982; Kjolseth, 1983; Lambert and Taylor, 1983).

But beyond the influence belief systems about language play in determining preferences are a host of other complex and interrelated factors -- nativity, social class, age, educational level, attitudes towards minorities, self-image -- associated with language preference.

Heterogeneity of Ethnic Groups and Their Preferences Relating to Schooling

The parents of language minority children are by no means a homogeneous group. Parents within even a single entholinguistic group can be different from each other in important ways. For example, ethnic and socioeconomic differences and home use of the mother tongue among Puerto Ricans, Mexican Americans and Cubans has been well documented by Laosa (1985). These differences were associated with their children's achievement (Laosa, 1984).

Asian Americans represent a diverse set of ethnic groups with vastly different languages, education backgrounds and immigration histories within the United States. There is considerable heterogeneity even within the various distinct Asian nationalities. For example, a Vietnamese sample is likely to include a high proportion of Chinese speakers, since the proportion of Chinese (Han) among the Vietnamese refugees is high. This is true both of arrivals through the Orderly Departure Program, as well as, of the "boat people" (Jones et al,

1978). A sample of Chinese parents may include monolingual English speakers through to non-English speakers whose primary spoken dialects might be one of several dialects of the Cantonese or Mandarin language. The preference for a dialect as a first language will vary not only according to generational and regional differences but also by education level, fluency in English, length in the United States, socioeconomic status and other factors (Fillmore, 1978; Hansen and Johnson, 1981).

The parents of language minority children might themselves be limited or non-English speaking, know their native language with varying degrees of familiarity, or be fluent in English but speak their native language at home for educational, cultural or philosophical reasons. Attitudes towards, and familiarity with, the English language may vary in the same family between parents or among parent-surrogates.

Not only does the activity at hand and the social context demanding linguistic proficiency at various levels influence choice (Cummins, 1981; Hansen et al., 1981), but parental belief systems (Sigel, 1985; Arnold, et al, 1975) and aspirations and expectations for their children and their value of schools as instruments for achieving those goals all have been found to be related to preferences for the kind and amount of special services parents choose.

Guthrie's (1985) study of a single school demonstrated the diversity of opinion (and the factors influencing choice) within a community. In his study, newly arrived immigrants fell into two groups. One group preferred at least part of academic instruction to be carried out in the home language, because they could participate more fully in their children's education without knowing English. Others preferred an

immersion program in English because they were anxious for their children's future schooling and careers, which they believed would require fluency in English. Professional, middle and upper class parents were like the latter group of parents in their preferences, because they were also concerned with English and mathematics achievement, and were willing to trade off maintenance of the home language for academic success in America. Furthermore, they could avail themselves of home instruction after school and on weekends or during school vacations in private schools and camps. Working class immigrant parents, on the other hand, were more like the first group of newly arrived immigrants. They lived in ethnic enclaves, used their home language at work, and believed that keeping the home language would be practical for their children for later communications since their future would lie within the ethnic community (Guthrie, 1985).

A Development Associates study (Jones, et al, 1980) found that parents were supportive of instruction in the home language "until the pupils were fluent in English," and overall parents chose a combination of 75% English to 25% home language. But there was a considerable range of opinion in their findings. Preferences relating to native language use in school appears to depend on the ethnolinguistic group in question, and the supports in the community and larger society for the particular home language. Where there is a critical mass of language minority children, community support for native language maintenance, native-language-speaking parents, teachers and aides, and native language instructional materials available, there appears to be more support for school time spent on native language instruction.

Whether parents prefer a bilingual or monolingual program for their language minority children also appears to be associated with such factors as societal attitudes toward their particular ethnic group, immigrant history and socioeconomic status. High status non-English languages are more attractive candidates for maintenance than native languages perceived as being of little value in America. Parents are also influenced by their perception of the future labor market value of a particular language (Lambert, 1981). Language preferences of parents of 17 year olds who are ready for work may differ from those of parents of 9 year olds, where immediate school issues are of more concern. Low income, newly arrived immigrant parents with little or no knowledge of English, usually show interest in having their children learning English as quickly as possible in school, so that they will be able to find better jobs in the future (Lambert, 1981).

Another factor influencing parent perceptions is their view of the role and responsibility of schools. Different language and ethnic groups hold different views about the relative responsibility of schools and families in maintaining and developing the home languages and cultures of language minority children. Unlike many Asian groups, very few Hispanic American communities or parent groups organize private, after school instructional programs specifically to keep up their children's interest and knowledge in their home language or culture, although they may invest in parochial school with bilingual education programs to achieve the same end (Elford, 1983). Practices vary among Asian language minority groups. Filipino parents have behaved as Hispanic parents have done. Huang, Chu and Macaranas (1980) reported

only three Filipino language schools on the east coast in 1980, against more than three hundred private part-time Chinese Schools and about fifty Korean Saturday schools.

Parental attribution of the causes of their children's progress in school, mediated by the acquisition of English through programs and services based on diverse educational philosophies, has also been associated with parental instructional preferences. Asian American parents have been found to attribute their children's academic success to hard work and time on task, and their failures to not paying enough attention and not working hard enough (Stevenson, 1984; Walberg, 1985). Parents whose children receive special language services have been found to be enthusiastic about those bilingual programs (Boyer, 1972; Carillo, 1973; Gutierrez, 1972; Mosley, 1969; Sutherland, 1975; Thomas, 1976).

Survey Research on Attitudes towards Bilingual Education

Several surveys were conducted in the 1980's to assess attitudes concerning bilingual education and the factors influencing choices.

Gallup Poll

In 1980, the Phi Delta Kappan annual education poll included a question on bilingual education. Eighty-two percent of the respondents were in favor of special services to teach non-English speaking children English before they are enrolled in the public schools. This option received widespread support from all groups regardless of age, income, region of the country or education level of respondent. While there was

support for special programs for non-English speaking children, the education of language minority children was not considered a central problem for the public schools.

Columbia University Poll

Cole (1980) conducted two surveys. One consisted of a sample of 518 Hispanics in New York City and Los Angeles and the second was a national sample of 721 non-Hispanics. The purpose of these surveys was to assess attitudes towards bilingual education and determine what background characteristics are associated with opinions about bilingual education.

Cole found that:

- o Hispanics were generally in favor of some form of bilingual education for children -- only 30% favored all English programs. Student proficiency in English did not appear to be a criterion influencing attitudes about bilingual education.

- o Education level and income were significantly related to attitudes -- high education and income Hispanics are less likely to have favorable attitudes towards bilingual education than are Hispanics with relatively low levels of formal education and income. But when use of Spanish was controlled, the effects of education and income on attitudes were significantly reduced.

- o Hispanics were more likely to justify support of bilingual education on cultural grounds than for educational and pragmatic reasons.

- o Non-Hispanics support bilingual education for non-English speaking children for pragmatic reasons -- only 33% favored all English programs, but they oppose bilingual programs for students who already speak English.

- o Generally, bilingual education was not a salient public issue for non-Hispanics.

o For the non-Hispanic group the only demographic factor that seemed to influence attitudes was age, with older individuals being less positive towards bilingual education.

o Attitudes towards assimilation had only a weak effect on Hispanic attitudes, but was significantly related to non-Hispanic opinion -- that is, those individuals who felt that immigrants should stop speaking their native language and start using English were less inclined to support bilingual education.

o Other variables that influenced non-Hispanic opinion were negative attitudes towards Hispanics and conservative political beliefs. Individuals espousing these beliefs were less likely to support bilingual education.

Public Attitudes toward Bilingual Education

Cardoza, Huddy and Sears (1984) conducted a nationwide survey of a non-Hispanic sample (n=1570) to determine public knowledge about bilingual education; to assess support for bilingual programs, and to explore reasons for current opinions.

The researchers found:

o There are a number of definitions of bilingual education ranging from foreign language instruction to programs for non-English speaking children. Only a small minority of respondents think of bilingual education as cultural and linguistic maintenance.

o Respondents were generally in favor of bilingual education, but positive attitudes appeared to be related to respondents' definition of bilingual education, that is those who defined bilingual education as teaching foreign students in their native tongue were consistently less positive towards bilingual education than those who thought it was either teaching English to foreign students, teaching a foreign language to English speakers, or a general reference to bilingualism.

o The researchers found that certain personal experiences were related to attitudes. Non-Hispanics living in a neighborhood with a large Hispanic population were less supportive of bilingual education than those who lived elsewhere. Having school aged children and being bilingual were positively related to support for bilingual education.

o Political factors explained more of the relationships concerning opinions about bilingual education than did personal experience factors. Most significant were attitudes towards minorities and orientation about assimilation into American society. Individuals with negative views towards minorities and positive views about assimilation tended to support bilingual education less than did those with more positive views of minorities and of pluralism as a reflection of America.

o Those whose political ideology tended to be liberal were more supportive of bilingual education than those with more conservative political beliefs.

Attitudes of Four Ethnolinguistic Groups towards Bilingual Education

Cardoza, Sanchez and Mendoza (1985) interviewed a small sample (n = 800) of Cuban, Mexican, Japanese and Chinese Americans to determine their opinions about bilingual education and foreign language instruction and to examine factors associated with those attitudes.

These researchers found:

o Chinese Americans were more positive than Japanese, but less positive than the Hispanic groups who were the most favorable toward bilingual education and foreign language instruction. Japanese Americans were the least favorable.

o A similar pattern emerged among the groups on rating the effectiveness of ESL, maintenance and transitional bilingual programs. Japanese Americans perceive bilingual education to be the least effective.

o Factors associated with attitudes varied by ethnic group. For Mexican Americans, age was the most significant predictor, with younger informants being more supportive of bilingual education than older ones. High use of Spanish was most significantly related to favorable attitudes for Cuban Americans. None of the predictors in the study was significantly related to Chinese American attitudes, but Japanese Americans who supported government aid to minorities had more positive attitudes toward bilingual education than did those who were less supportive of government assistance.

Hamtramck/Pontiac Study

Lambert and Taylor (1986) examined the views of Poles, Arabs, Albanians, Hispanics, Black and white Americans in a Detroit community to determine their attitudes towards maintenance of cultural heritage versus assimilation; their attitudes about bilingualism; and their attitudes towards other racial and ethnic groups in the community.

Lambert and Taylor (1986) found:

- o Considerable support for multiculturalism among the ethnic groups. Mexican Americans and Puerto Ricans were extremely committed to maintaining their language and culture, with Puerto Ricans being the most supportive. These groups, particularly Puerto Ricans, believe that the schools should play a role in promoting bilingualism

- o White middle class respondents were supportive of cultural maintenance and bilingualism. This was not the case for working class whites who tended to be negative towards cultural and racial diversity.

- o Black Americans were generally favorable toward multiculturalism and generally against assimilation.

Summary of Literature Review

The research literature reveals a wide range of opinion as to the meaning of bilingual education. Of concern to us here, however, were public attitudes regarding the definition of bilingual education as special language services -- maintenance, transitional and ESL programs -- for children who come from homes where a language other than English is spoken. The research indicates considerable public support for services aimed at helping language minority students learn English, but more support from Hispanic groups especially for transitional and maintenance programs, than from non-Hispanics.

The review of the literature indicates the following factors to be related to opinions concerning bilingual education:

- o demographic characteristics -- age, ethnicity, education level, and income
- o language variables -- competence in English, use of non-English language
- o respondents' values about American society
- o beliefs about the role and responsibilities of schools in the socialization of young children
- o attitudes towards minority groups, and
- o political ideologies.

The research to date is limited: the samples of respondents are small and tend to be regional in scope; Asian respondents are rarely included in the study design; and concerns for school experiences and achievement of children of survey informants are not considered.

CHAPTER THREE -- METHODOLOGY

In this section first we describe the procedures used to select the sample. Next we describe the questionnaire and define the variables used in these analyses and finally we discuss the limitations of the study.

Sample Design

The parent sample was derived from two sources. The first source was a sample of parents of students selected for the special probe of language minority students conducted as part of the National Assessment of Educational Progress (NAEP). The second source was a supplementary telephone sample chosen in two cities. One of those cities had a large Puerto Rican population, the other a large Cuban population.

The NAEP Parent Sample

Procedures for selecting the NAEP language minority student sample are described in detail elsewhere and are discussed only briefly here.[1] The NAEP process identified a national probability sample of Asian and Hispanic students through a three-stage process. First, 94 primary

[1] For a more complete description of NAEP sampling procedures see: Baratz-Snowden, J., Rock, D., Pollack, J. and Wilder, G. (1988) The educational progress of language minority children: findings from the NAEP 1985-86 special study. Princeton, NJ: Educational Testing Service, Appendix A.

sampling units (PSU's) with large numbers of Asian and/or Hispanic residents were identified, then target schools were designated within those units. Only schools that could be expected to enroll large numbers of Asian and/or Hispanic students were chosen. Within schools, eligible students were selected randomly from a roster prepared by school staff. In this instance, the roster included all Asian and Hispanic students who were either in grades 3, 7 or 11 and/or who were 9, 13, or 17 years old. For the parent preference survey, this ethnic student data base was restricted for sampling purposes to those students who identified themselves as coming from a home where a language other than English was spoken or who were identified by their school to be limited in English proficiency.

As a result, the student population that was the base for the parent sample represents a substantial proportion of the total population of Asian and Hispanic 9-, 13-, and 17-year-olds (depending on the ethnic group, from 60 to 75 percent of the total number of students in that group as estimated from the United States Census of 1980). At the same time, such students who do not come from homes where a non-English language is spoken, do not live in locations where large numbers of Asian and Hispanic individuals live, or attend schools with large numbers of Asian and Hispanic students, or are not immediately recognizable or were otherwise not identified by school personnel as Asian or Hispanic, are underrepresented. Undercoverage of students may also have occurred by virtue of population growth since the 1980 census, sampling error, and undetected errors in the implementation of the study by field staff at the schools.

The parents of Asian, Mexican American, Puerto Rican and Cuban students in the NAEP language minority sample were the target population for the parent preference study; however, the parent preference survey sample was restricted to 28 of the 94 NAEP language minority PSUs. These PSUs were purposively selected to represent about 75% of the Puerto Ricans in the language minority population, 60% of the Mexican Americans, 78% of the Cubans, and 67% of the Asians. However, because of unanticipated problems with school cooperation and parent response rates, the NAEP parental sample resulted in an adequate sample of Asian (n = 867) and Mexican American parents (n = 904), but a very small Puerto Rican sample (n = 291) and no useful Cuban parent sample.

The Supplemental Parent Sample

The second part of the sample was chosen by a somewhat different method, necessitated by two separate events that led to the loss of large numbers of Cuban and Puerto Rican students from the NAEP sample. In one instance, the public school system in a large metropolitan area with a major representation of Cuban students in the NAEP language minority probe refused to participate in the parent preference study. In the second instance, the public schools in a large metropolitan area with a major representation of Puerto Rican students refused to provide the names and addresses of parents but agreed to send parents a letter describing the study and urging parent participation. The consent procedure involved the school district sending letters to the parents, who would then return postcards directly to us, granting their permission to be contacted and providing their addresses and telephone

numbers. This procedure resulted in gaining the cooperation of only 16% of the targeted parents.

Given the shortfall in our anticipated sample in these two instances, we developed a supplementary sample through a telephone process. In both cities, this process involved randomly choosing individuals with Spanish surnames from the telephone directory and administering a set of screening questions. The number of households so identified was arrived at through estimates from the 1980 census of households headed by Cubans or Puerto Ricans in the counties of interest. The screening questions asked whether the household contacted included a school child between the ages of 5 and 18 of the appropriate ethnicity. Again, the sample was selected in a location that could be expected to yield large numbers of the ethnic groups of particular interest (Cubans in one case and Puerto Ricans in the other), and so represents a substantial proportion of the parents in these groups. At the same time, errors in any of the assumptions on which the sampling plan was based (like the number of Cuban or Puerto Rican households in the counties of interest) could have resulted in underrepresentation of the groups in question. Because of the way in which the sample was drawn, Cuban and Puerto Rican parents who live in other places are underrepresented. So are Cubans and Puerto Ricans whose surnames are not apparently Spanish. And, finally, so are Cubans and Puerto Ricans who, for one reason or another, do not have listed telephone numbers.

The supplemental sample procedures produced a sample of Cuban parents (n = 502) and an additional sample of Puerto Rican parents (n =340). Because the selection processes were different and were based on

different populations, the NAEP parent sample and the supplementary parent samples cannot be combined if weights must be applied in order to arrive at estimates for the national population.[2] Because the Puerto Rican sample cannot be combined for descriptive analysis, in the fourth chapter where the descriptive data are presented we show the results separately for our two Puerto Rican samples.

Table 1 indicates the size of the parent sample and the number of parents with children in elementary (9 years old or in third grade for NAEP sample, 6-10 years for supplementary sample), junior high (13 years old or in grade 7 for NAEP sample, 11-15 years for supplementary samples) and high school (17 years old or in grade 11 for NAEP sample, 16-20 years for supplementary sample).

Table 1

PARENT PREFERENCE SAMPLE BY AGE OF CHILD

	N	6-10	11-15	16-20
Asian	867	198	317	352
Mexican American	904	364	335	205
Puerto Rican(N)	291	97	98	96
Puerto Rican(S)*	340	107	160	69
Cuban*	502	136	232	133

*Supplementary Telephone Sample

[2] Appendix A includes a description of the sampling and weighting procedures used in this study as well as an estimation of what proportion of the target population this study sample represents.

Questionnaire Content

The survey instrument contained four general areas of inquiry:

1. items relating to parents' perceptions of and attitudes toward school programs and practices;
2. items relating to parents' general aspirations for their children and those related specifically to education and language learning;
3. items related to family practices related to language use and to contact and involvement in their children's schooling; and
4. demographic items.[3]

Variables Used in this Study

The demographic, home educational support, language, special services and outcome variables used in this analysis are presented below.

Demographic Characteristics

- o ethnicity (q. 83, 84 and 85)
- o gender of parent respondent
- o age of target child
- o place of birth of parent and of child (q. 86 and 11)
- o length of time in the United States (q. 93)

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[3]The complete survey with response percents by total sample is included in Appendix B. This appendix also includes a table of intercorrelations of the variables used in this study.

o parent education (q. 88 and 92) The analysis employs a composite variable here that represents the highest education level of either parent.

o parent occupation (q. 102 and 104) The open-ended responses here were coded into the following categories: unskilled, semiskilled, clerical, technical/managerial, and professional. The analysis employs a composite variable that represents the highest occupation level of either parent.

o parent income (q. 105)

Home Educational Support Variables

The home support variables involved items relating to parental behaviors and attitudes.

Support Behaviors. Three items were relevant here:

o child's early experience with language (q. 37)

o how often does parent ask about schoolwork (q. 33)

o count of media items in the home (q. 80 a-d).

"Child's early language experiences" relates to whether or not the child was read to as an infant, and if read to what language was used. The count of media items in the home is a composite variable representing a count of positive response to questions about the presence in the home of newspapers, magazines, books, tapes and records.

Support Attitudes. Two items are relevant here. One relates to the parent's belief in the importance of learning to speak the home language well (q. 29), and the other concerns the importance the parent attaches to their children retaining the customs of their ancestors (q. 94).

Language Behavior

Four factors are used here:

- o parent self-rated competence in English (q. 79 a-d)
- o parent self-rated literacy in non-English language (q.79 e-f)
- o parent ratings of various family members' use of English and non-English languages (q. 77/78 a-i)
- o parent rating of child's English (q. 17 - 20) and non-English language skills (q. 25 - 28)

The language competence and use ratings are composite variables. For ease of interpretation, all variables (except as noted) were scaled so that a high number represents a high level of a characteristic (e.g. good language proficiency, high level of English use, etc.) and low numbers indicate low levels.

The "parent rating of child's competence in English" is a mean of parent responses to four questions (q. 17 -20): How well does child speak English? ...does child understand English when it is spoken? ...does child read English? ...does child write English? Original responses were scaled 1 = "very well" ... 4 = "not at all." The composite consists of the mean parent response (if at least 3 of the 4 questions are answered), rounded to the nearest integer, and reverse-scaled so that 1 = "not at all" and 4 = "very well." Two-item composites were also used for speak/understand and read/write so that the individual attributes could be analyzed separately. If one of the two items was not answered, the other was used alone to represent the characteristic.

In a similar manner, means of 4 items (speak, understand, read and write) were computed for child's competency in the non-English language (q. 25-28) and parent's competency in English (q. 79 a-d). Parent's literacy in the non-English language consists of two items: "How well do you read (q. 79e) and write (q. 79f) the non-English language?" Response scales are the same as for child's competency (1 not at all ... 4 very well), and again, 3 of 4 items must be present for the 4-item composite, 1 or both for the 2-item composite.

Questions 77 and 78 elicited detailed information from the parent on the extent of English and non-English use by various household members in a variety of situations. Two composite scales were computed from these responses:

"Parents' use of English" is defined as the mean of:

q.77/78a language you speak to child
q.77/78b language you speak to your spouse/partner
q.77/78c language you speak to friend
q.77/78d language you use when you go to the store

"Child's use of English" includes the following items:

q.77/78e language child speaks to you
q.77/78f language child speaks your spouse/partner
q.77/78g language child uses with siblings
q.77/78h language child uses with his friend

These use variables were scaled as follows:

Always non-English	= 1
Both languages	
both but more non-English	= 2
both about the same	= 3
both but more English	= 4
Always English	= 5

Mean scores were computed for the language use composites if the parent responded to at least two of the four questions. This lower

response rate requirement takes into account the fact that not all questions apply to all households, for example a spouse/partner and/or siblings may not be components of every family.

Experience with Language Minority Services

We used the following items to learn about parent's experiences with educational services for language minority children.

- o child has received special language services (q. 42)
- o school encourages use of minority language (q. 48)
- o teachers speak minority language (q. 52)
- o child is in a bilingual, immersion or transitional program (q. 75)

Educational Goals and Preferences Variables

The items used to describe the educational goals and preferences of Asian, Mexican American, Puerto Rican and Cuban parents were:

Educational Goals of Parents

- o three most important educational outcomes (q. 16)
- o importance of learning to speak English (q. 24)
- o importance of learning to speak home language (q. 29)
- o importance of all children learning a non-English language (q. 49)
- o importance of children retaining customs of their ancestors (q. 94)

Parental Instructional Preferences.

- o school should give language minority children special help in learning English (q. 58)
- o school should give language minority children extra help with learning basic subjects such as math and science (q. 62)

- o does the use of non-English language in school interfere with learning English? (q. 70)

- o what language should be used in teaching basic subjects? (q. 66)

- o what language should be used to teach non-English speaking children to read and write? (q. 69)

- o should the non-English language be taught if it means less time for English? ...for math and science? ...for music? ...for art? (q. 71 a-d)

- o should non-English language be used if it will mean that the child learns math and science better? (q. 72)

- o preference for bilingual, transitional or immersion programs (q. 73)

- o who should have the main responsibility for teaching children to speak, read and write English; speak, read and write non-English language; teach history and tradition of non-English speaking children's ancestors (q. 50).

Two composites were developed to describe parent preferences. The first had to do with whether or not children who speak non-English language should get extra help. This composite is derived from two questions:

- q. 58 ... should child be given extra help with learning English?

- q. 62 ...should child be given extra help with other subjects?

The composite variable is scored 1 if the parent responded "no" to both questions, 2 if one but not both were answered "yes", and 3 if the parent said "yes" to both.

The second parent preference composite relates to how long the non-English language should be used in the process of teaching basic subjects such as math and science. The coding is as follows:

1 = (not at all) if response to q. 66 is "only in English"

2 = (part way) if response to q. 66 is "only in non-English", or both; and response to q. 67 or 68 is "until learned enough English"

3 = (always) if response to q. 66 is "only non-English", or both; and response to q. 67 or 68 is "all through school"

Survey Implementation

The survey was conducted in person or over the phone.[4] The questionnaire was administered in English, Chinese, Vietnamese or Spanish according to the parent's preference. In the instances where parents spoke none of these languages, a translator -- usually another member of the household or occasionally a neighbor -- assisted in the interview. Table 2 indicates the language in which the survey was administered.

Table 2

LANGUAGE IN WHICH INTERVIEW WAS CONDUCTED

	N	English % (SE)	Spanish % (SE)	Other % (SE)
Asian	859	93.8(1.4)	0.0(0.1)	6.2(1.4)
Mexican American	887	54.2(2.9)	45.6(2.9)	0.2(0.3)
Puerto Rican(N)	287	58.7(5.0)	41.2(5.0)	0.1(0.3)
Puerto Rican(S)*	338	35.1(4.5)	64.9(4.5)	0.0(0.0)
Cuban*	501	5.4(1.7)	94.6(1.7)	0.0(0.0)

*Supplementary Telephone Sample

[4] About 30% of the NAEP interviews were conducted in the home with the rest being administered by telephone. All the supplementary interviews were conducted by phone.

More than 90% of the Asians were interviewed in English, and only 6% required an intermediary as translator. The vast majority of Cuban parents were interviewed in Spanish, and close to half of the Puerto Rican and Mexican American parents also responded in Spanish. The larger percentage of Hispanic respondents, compared to Asian informants, who preferred the interview to be conducted in their non-English language may well be a function of our procedures which resulted in a greater availability of interviewers who spoke Spanish compared to interviewers who spoke Japanese, Cambodian, Chinese, Vietnamese, Hmong, Korean and the other languages of our Asian informants.

Limitations of the Data

Before launching into broad policy implications deriving from this analysis, we must add some caveats about the data.

- First, because of the peculiarities of the total sample, resulting as it did from two quite different procedures, any conclusions and inferences based on the data must be viewed with caution. In the case of the supplementary samples of Puerto Rican and Cuban parents, there are o weights on which to base national estimates. In fact the representativeness of the supplementary samples is unclear. For this reason, the descriptive results from the Puerto Rican parents are presented as two separate groups, one NAEP respondents and the other supplemental sample respondents. Moreover the two samples --NAEP and supplemental -- cannot be combined for purposes of the descriptive analyses precisely because they were derived in different ways and are probably representative of somewhat different populations.

- Second, this is parent reported data, and may not necessarily reflect what school personnel believe are their programs, or policies and practices.

- Third, there was as much "teaching" as there was gathering information concerning the three types of programs --

"bilingual, transitional and immersion." Many of the concepts we were asking about are abstract, or idiosyncratic to educators and may well have "lost something in the translation."

o Fourth, many parents did not know what the situation was in their child's school in regard to language policies and practices, and the "I don't knows" if resolved might alter some of the findings.

o Finally, this is not primarily a survey of the preferences of parents of limited English proficient children; it is a study of parents of language minority children. Our sample includes the parents of Asian, Cuban, Mexican American and Puerto Rican school aged children who come from homes where a language other than English is spoken, but only a small percentage of the parents in the sample had children whom they and/or personnel in the school deemed to be so limited in English that they could not benefit from instruction in English.

CHAPTER FOUR - DESCRIPTIVE FINDINGS

In discussing the descriptive results we have endeavored to identify consistent patterns in the data and to use the relatively stringent criteria of a .01 level for statistical significance and a design effect of 3. These criteria were imposed in an effort to minimize overinterpretation in the application of large numbers of statistical tests.

Demographic Information

Below we present a demographic profile of each of the ethnic groups in our sample. The information in these profiles is derived from Tables 3 - 7.

Asian Parents

The Asian sample represents a heterogeneous group from diverse cultures. The largest single ethnic group in this study were Chinese (25%). The remainder were Vietnamese (18%), Cambodian (5%), Laotian (4%), Korean (8%) and other Asian (34%).

Asian parents were less likely than all Hispanic groups, save Cubans, to be born in the United States. The vast majority (93%) were born in southeast Asia, as were 64% of their children. About one quarter (25%) had lived in this country five years or less, about half (47%) had lived here between six and 15 years, and the remainder (28%) had been here 16 years or more.

Table 3

PLACE OF BIRTH OF PARENT AND THEIR CHILDREN

	N	U.S. %(SE)	Puerto Rico %(SE)	Latin America % (SE)	S.E. Asia %(SE)	Other %(SE)
Child's Place of Birth						
Asian	864	34.8(2.8)	0.0(0.1)	0.0(0.1)	63.8(2.8)	1.4(0.7)
Mexican American	902	80.9(2.3)	0.0(0.1)	18.5(2.2)	0.1(0.2)	0.2(0.2)
Puerto Rican(N)	290	79.1(4.1)	20.6(4.1)	0.1(0.3)	0.3(0.5)	0.0(0.0)
Puerto Rican(S)*	340	82.5(3.6)	16.4(3.5)	0.7(0.8)	0.0(0.0)	0.4(0.6)
Cuban*	501	63.5(3.7)	1.8(1.0)	34.1(3.7)	0.0(0.0)	0.6(0.6)
Parent's Place of Birth						
Asian	864	4.7(1.2)	0.0(0.0)	2.1(0.8)	92.8(1.5)	0.5(0.4)
Mexican American	903	51.2(2.9)	0.0(0.1)	48.7(2.9)	0.0(0.0)	0.0(0.1)
Puerto Rican(N)	289	11.0(3.2)	87.9(3.3)	0.9(1.0)	0.0(0.0)	0.2(0.5)
Puerto Rican(S)*	340	24.3(4.0)	75.4(4.0)	0.4(0.6)	0.0(0.0)	0.0(0.0)
Cuban*	496	2.0(1.1)	0.0(0.0)	97.8(1.1)	0.0(0.0)	0.2(0.3)

*Supplementary Telephone Sample

Table 4

YEARS PARENT HAS LIVED IN U.S.

	N	0-5 Yrs. % (SE)	6-15 Yrs. % (SE)	16-30 Yrs. % (SE)	31+ Yrs. % (SE)
Asian	864	24.9(2.5)	46.6(2.9)	21.4(2.4)	7.0(1.5)
Mexican American	894	3.6(1.1)	29.4(2.6)	23.1(2.4)	43.9(2.9)
Puerto Rican(N)	291	3.3(1.8)	19.9(4.1)	52.9(5.1)	23.8(4.3)
Puerto Rican(S)*	338	6.1(2.3)	16.4(3.5)	38.5(4.6)	39.0(4.6)
Cuban*	502	8.0(2.1)	32.1(3.6)	57.8(3.8)	2.2(1.1)

*Supplementary Telephone Sample

Table 5

PARENT EDUCATION

	N	0-11 Yrs. % (SE)	HS Grad. % (SE)	Post HS % (SE)	BA Degree/ Graduate % (SE)
Asian	851	17.9(2.3)	18.8(2.3)	17.8(2.3)	45.4(3.0)
Mexican American	892	53.4(2.9)	27.0(2.6)	15.0(2.1)	4.7(1.2)
Puerto Rican(N)	288	37.2(4.9)	38.7(5.0)	13.9(3.5)	10.3(3.1)
Puerto Rican(S)*	339	33.5(4.4)	33.4(4.4)	22.1(3.9)	11.0(2.9)
Cuban*	501	23.8(3.3)	23.8(3.3)	24.8(3.3)	27.7(3.5)

*Supplementary Telephone Sample

Table 6

PARENT OCCUPATION

	N	Unskilled %(SE)	Semi-Skilled % (SE)	Skilled % (SE)	Clerical % (SE)	Technical/ Managerial % (SE)	Professional % (SE)
Respondent's Occupation							
Asian	513	6.7(1.9)	12.8(2.6)	11.4(2.4)	26.6(3.4)	24.9(3.3)	17.2(2.9)
Mexican-American	434	22.0(3.4)	27.7(3.7)	13.1(2.8)	23.5(3.5)	8.4(2.3)	5.2(1.8)
Puerto Rican(N)	113	20.0(6.5)	19.5(6.5)	3.9(3.1)	39.2(8.0)	5.6(3.8)	11.1(5.1)
Puerto Rican(S)*	129	8.4(4.2)	18.9(6.0)	6.9(3.9)	41.8(7.5)	11.4(4.8)	12.5(5.1)
Cuban*	312	13.5(3.3)	17.3(3.7)	14.1(3.4)	33.7(4.6)	13.5(3.3)	8.0(2.7)
Spouse's Occupation							
Asian	490	4.4(1.6)	22.0(3.2)	8.2(2.1)	22.4(3.3)	28.4(3.5)	14.4(2.7)
Mexican-American	542	26.5(3.3)	25.6(3.2)	25.8(3.3)	11.5(2.4)	8.4(2.1)	2.0(1.0)
Puerto Rican(N)	115	21.2(6.6)	20.3(6.5)	26.9(7.2)	26.6(7.1)	1.9(2.2)	3.2(2.8)
Puerto Rican(S)*	155	13.3(4.7)	25.1(6.0)	15.8(5.1)	28.9(6.3)	11.8(4.5)	5.1(3.1)
Cuban*	388	10.1(2.6)	16.8(3.3)	21.1(3.6)	32.0(4.1)	14.4(3.1)	5.4(2.0)
Occupation Composite							
Asian	629	2.6(1.1)	14.9(2.5)	11.4(2.2)	21.7(2.8)	27.5(3.1)	21.9(2.9)
Mexican-American	700	19.0(2.6)	27.1(2.9)	21.5(2.7)	18.8(2.6)	9.1(1.9)	4.6(1.4)
Puerto Rican(N)	161	13.9(4.7)	16.7(5.1)	16.0(5.0)	39.3(6.7)	4.6(2.9)	9.4(4.0)
Puerto Rican(S)*	211	7.8(3.2)	22.0(4.9)	10.2(3.6)	36.0(5.7)	12.9(4.0)	11.2(3.8)
Cuban*	462	7.8(2.2)	13.9(2.8)	17.5(3.1)	34.2(3.8)	17.7(3.1)	8.9(2.3)

*Supplementary Telephone Sample

Table 7

PARENT INCOME

	N	<6000 %(SE)	6-9999 % (SE)	10-14,999 % (SE)	15-19,999 % (SE)	20-29,999 % (SE)	30,000 + % (SE)	DK, N.R. % (SE)
a Total Yearly Family Income								
Asian	853	6.4(1.4)	9.2(1.7)	10.0(1.8)	9.1(1.7)	15.5(2.1)	37.7(2.9)	12.1(1.9)
Mexican American	891	10.2(1.8)	16.6(2.2)	19.9(2.3)	11.5(1.9)	13.7(2.0)	13.0(1.9)	15.1(2.1)
Puerto Rican(M)	281	28.5(4.7)	11.9(3.4)	17.2(3.9)	7.4(2.7)	12.4(3.4)	9.7(3.1)	13.0(3.5)
Puerto Rican(S)*	340	24.8(4.1)	14.5(3.3)	12.2(3.1)	9.4(2.7)	12.9(3.1)	17.4(3.6)	8.9(2.7)
Cuban*	502	2.8(1.3)	6.2(1.9)	9.4(2.3)	10.4(2.4)	14.1(2.7)	26.7(3.4)	30.5(3.6)

*Supplementary Telephone Sample

As a group, Asian parents were quite well educated.[5] Only 18% of the families indicated that the more highly educated parent had less than a high school education and 45% had graduated from college (15% of whom held graduate or professional degrees). Their occupations reflected their high degree of education. While 17% were employed in unskilled or semiskilled jobs, 27% held technical or managerial positions and another 22% were working in the professions. Commensurate with these education and occupation levels, 38% of the families reported incomes at or exceeding $30,000 and only 16% reported incomes below $10,000.

Mexican American Parents

Approximately half of the Mexican American parents (51%) were born in the United States as were the vast majority of their children (81%). In contrast to Asian parents, only 4% of the Mexican American parents

[5]The education and occupation levels reported here are the highest level of either parent.

had lived here five years or less and two thirds (67%) had been here 16 years or more.

Education and occupation levels were also dramatically different from the Asians. Over half (53%) of the parents had not completed high school and only 5% had graduated from college. Less than 2% had received graduate degrees. Slightly less than half (46%) of the children came from families where the highest occupation level was that of unskilled or semi-skilled laborer; another 21% of the sample were skilled workers and only 14% of the sample were employed in technical/managerial or professional positions. More than a quarter of the households (27%) reported incomes below $10,000, while only 13% had incomes at or exceeding $30,000.

Puerto Ricans

The two Puerto Rican samples differed significantly regarding the likelihood of the parent being born on the United States mainland -- 11% of the NAEP parents compared to 24% of the supplemental Puerto Rican parents. Both these samples were less likely than Mexican American parents and more likely than Cuban parents to be born in the continental United States. As with the Mexican American sample, the vast majority of children (79 - 83%, depending on sample) were born in the United States. Regardless of place of birth, the great majority of Puerto Rican respondents had lived in the continental United States for more than 16 years (77 - 78%). Less than 5% were relative newcomers -- having lived here less than five years. Unlike the Asian parents, over one third of the Puerto Rican parents (34 - 37%) had not completed high

school, and about 11% had college degrees. Commensurate with their lower levels of education, a relatively small, compared to Asians, proportion of Puerto Rican parents were employed in technical/managerial and professional occupations (14 -24%). Slightly more than 40% of Puerto Rican parents were employed in unskilled, semi-skilled or skilled positions (40 - 47%). Puerto Rican parents (23 -29%) were more likely than any other group to report family incomes of $6000 or less, less likely than Asian parents to report incomes of $30,000 or more (10 - 17%).

Cubans

Cuban parents were less likely than all other Hispanic groups to have been born in the United States. Indeed, 98% of the respondents had been born in Cuba or the Caribbean Basin. Nonetheless, almost two-thirds (64%) of their children were born in the United States. While Cuban children were more likely to be born in the United States than Asian children, they were less likely to have been born here than any of the other Hispanic groups. Less than 10% of the Cuban parents had lived in the county for under five years, and 60% had lived here for more than 16 years.

Cubans generally reported more education than the other Hispanic groups but less than Asians. They (24%) were less likely than Mexican American parents (53%) to report that they had not graduated from high school, and more likely than the Mexican American and Puerto Rican NAEP parents to have earned a college degree. Their occupations also reflected this educational advantage -- 39% had unskilled, semiskilled

or skilled positions, 34% worked in clerical jobs, 18% were managers and technicians, and 9% were professionals.

The family income data for Cubans may be unreliable because almost a third (31%) did not answer this question. Given that caveat, we note that Cubans were less likely to have incomes of $6000 or less, and more likely to have incomes of $30,000 or more than were Mexican Americans or Puerto Ricans.

Language Variables

Tables 8 - 10 present the data on language use and competence of the parents and their children. The tables presented here are composite variables created from the parent responses to a variety of items. The "use" composite is the mean of responses to items concerning the language used in various situations and with family members and friends. The language competence factors are mean scores of responses to items relating to speaking, understanding, reading and writing English and the home language.

Language Use

Cubans were significantly less likely than all other groups to use more English, or only English. Approximately a third (32% - 38%) of the other groups reported using English more frequently than a non-English language, compared to only 8% of Cuban parents' predominant use of English. Cuban parents (66%) were also more likely than all other groups to use a non-English language exclusively in talking with

children, spouses, etc., while Asian parents (13%) were least likely to do so. There were no significant differences in exclusive use of Spanish between the Mexican American parents (31%) and the Puerto Rican parents (26 - 28%). (Table 8)

Table 8

PARENT'S USE OF ENGLISH
AND NON-ENGLISH LANGUAGE

	N	Non-English Language Only % (SE)	More Non English % (SE)	Both - % (SE)	More English % (SE)	Only English % (SE)
Composite						
Asian	866	13.2(2.0)	27.3(2.6)	27.7(2.6)	19.6(2.3)	12.2(1.9)
Mexican Amer.	904	30.5(2.7)	13.8(2.0)	17.7(2.2)	19.9(2.3)	18.0(2.2)
Puerto Rican(N)	289	25.7(4.5)	17.1(3.8)	22.2(4.2)	20.1(4.1)	14.9(3.6)
Puerto Rican(S)*	340	28.0(4.2)	17.9(3.6)	17.0(3.5)	19.7(3.7)	17.3(3.5)
Cuban*	501	65.5(3.7)	16.8(2.9)	10.2(2.3)	5.6(1.8)	2.0(1.1)

*Supplementary Telephone Sample

Language Competence

Table 9 describes parents' language competence self-ratings. About a third of the Asian, Mexican American and Puerto Rican parents judged themselves to speak, understand, read and write English "very well." Twenty-three percent of the Cuban parents judged their English competence as "very well" -- a competency level significantly below the supplemental Puerto Rican parents self-ratings. Depending on the group reporting, between 34 and 49% rated themselves as not very competent or not competent at all in their ability to read, write, understand and speak English. Mexican American parents were more likely than

Asian and Puerto Rican parents in the NAEP sample to rate themselves as not at all competent in English.

Table 9

PARENT'S COMPETENCE IN ENGLISH AND LITERACY IN NON-ENGLISH LANGUAGE

	N	Very Well % (SE)	Pretty Well % (SE)	Not Very Well % (SE)	Not At All % (SE)
English Competence					
Asian	866	30.5(2.7)	34.0(2.8)	27.1(2.6)	8.4(1.6)
Mexican American	903	32.7(2.7)	21.3(2.4)	25.7(2.5)	20.4(2.3)
Puerto Rican(N)	290	29.5(4.6)	36.4(4.9)	24.8(4.4)	9.3(3.0)
Puerto Rican(S)*	340	40.1(4.6)	23.5(4.0)	24.3(4.0)	12.1(3.1)
Cuban*	502	23.3(3.3)	27.5(3.5)	33.1(3.6)	16.1(2.8)
Non-English Language Literacy					
Asian	866	71.2(2.7)	13.0(2.0)	8.4(1.6)	7.3(1.5)
Mexican American	900	31.8(2.7)	27.2(2.6)	21.3(2.4)	19.7(2.3)
Puerto Rican(N)	289	55.0(5.1)	27.9(4.6)	12.2(3.3)	5.0(2.2)
Puerto Rican(S)*	340	46.9(4.7)	28.7(4.3)	16.5(3.5)	7.9(2.5)
Cuban*	501	78.6(3.2)	18.6(3.0)	2.2(1.1)	0.6(0.6)

*Supplementary Telephone Sample

When it came to judgments regarding reading and writing in the non-English language, the differences between the groups were significant. Asian parents indicated considerably more non-English literacy skill than all Hispanic groups but Cubans. Cubans rated themselves as more literate in Spanish than did Puerto Ricans and Mexican Americans. Mexican Americans were the least able to read and write their non-English language very well. Indeed, while almost three-quarters of the Asians (71%) and 79% of the Cubans indicated they read and wrote their non-English language

"very well," only about 50% (55-47%) of the Puerto Ricans and a third of the Mexican Americans so rated their skills. Furthermore, 20% of the Mexican Americans indicated that they were illiterate in Spanish, a figure substantially higher than any other group. Cubans were the least likely to report that they could not read or write their non-English language.

In rating their children, the vast majority of parents (87 -97%) indicated that their children could speak, understand, read and write English "very well" or "pretty well." Asians were significantly more likely to rate their children's competence as "very [good]" (61%) than were Mexican Americans (45%), but were less likely to rate their children "very well" compared to Cuban parents (79%). Asian and Mexican American parents were more likely to rate their children as not speaking English very well than were Cuban parents and supplemental Puerto Rican respondents.

When asked to rate their children's skills in the non-English language, there were dramatic differences in competence ratings compared to English skills. While Cubans were more likely than other groups to rate their children's competence in a non-English language as very good, only 41% did so. Less than 15% of the other Hispanics and Asians (8 to 14% depending on the group) rated their child's non-English language skills as very good. Asians were most likely (26%) and Cubans least likely (1%) to indicate their children had no competence in the parents' non-English language. (Table 10)

Table 10

PARENT'S RATINGS OF THEIR CHILDREN'S LANGUAGE COMPETENCE

	N	Very Well % (SE)	Pretty Well % (SE)	Not Very Well % (SE)	Not At All % (SE)
English Competence					
Asian	866	61.0(2.9)	27.5(2.6)	11.3(1.9)	0.2(0.3)
Mexican American	891	45.4(2.9)	41.2(2.9)	13.0(1.9)	0.5(0.4)
Puerto Rican (N)	291	66.3(4.8)	28.4(4.6)	5.3(2.3)	0.0(0.0)
Puerto Rican (S)*	340	65.3(4.5)	25.4(4.1)	9.4(2.7)	0.0(0.0)
Cuban*	502	78.5(3.2)	18.1(3.0)	3.4(1.4)	0.0(0.0)
Non-English Competence					
Asian	866	12.5(1.9)	19.9(2.4)	41.2(2.9)	26.4(2.6)
Mexican American	898	8.0(1.6)	26.4(2.5)	47.4(2.9)	18.2(2.2)
Puerto Rican(N)	290	10.4(3.1)	33.1(4.8)	42.9(5.0)	13.5(3.5)
Puerto Rican(S)*	340	13.5(3.2)	20.0(3.8)	51.3(4.7)	15.1(3.4)
Cuban*	502	41.2(3.8)	38.0(3.8)	19.9(3.1)	0.8(0.7)

*Supplementary Telephone Sample

Children's Experiences with Language Minority Services

Tables 11-13 present the data on the exposure to language minority services in school of children whose parents are in this sample. It is important to bear in mind that these cross-tabs do not take into consideration the English language skills of the children or any other variables that may be associated with assignment to special language services, but merely present whether or not these children have been exposed to certain kinds of language programs and experiences in school.

Exposure to Non-English language at School

Parents were asked about school policy regarding the use of the child's non-English language at school. (Table 11) Approximately one third of the NAEP parents (32% of the Asians, 38% of the Mexican Americans and 38% of the NAEP Puerto Ricans) did not know whether or not the school encouraged, discouraged or was neutral about the use of a non-English language at school. Cubans were more likely to know about school policy than all groups, save the supplemental Puerto Rican parents. While about 15% of the parents indicated that the school their child attended discouraged the use of the child's non-English language at school, there were statistically significant differences between Asian parents and all other parental groups concerning the interest of their child's school in encouraging or being neutral about the use of a non-English language at school. Generally, Asian children did not attend schools where use of their non-English language was encouraged. A quarter to a half of the Hispanic students (25 - 50%) attended schools that encouraged the use of Spanish.

Table 11

SCHOOL POLICY ON USE OF NON-ENGLISH LANGUAGE

	N	Encourage % (SE)	Discourage % (SE)	Not Care % (SE)	Don't Know % (SE)
Does School Encourage Use of Non-English Language					
Asian	866	5.1(1.3)	14.9(2.1)	48.3(2.9)	31.7(2.7)
Mexican American	904	27.4(2.6)	16.1(2.1)	18.3(2.2)	38.2(2.8)
Puerto Rican(N)	291	25.1(4.4)	12.3(3.3)	24.4(4.4)	38.1(4.9)
Puerto Rican(S)*	340	40.3(4.6)	18.4(3.6)	20.1(3.8)	21.1(3.8)
Cuban*	502	50.2(3.9)	12.4(2.5)	17.5(2.9)	19.9(3.1)

*Supplementary Telephone Sample

We asked parents whether the child's non-English language was used at school. Those who responded positively were asked whether any of the child's teachers spoke the non-English home language. Again there were significant differences among the groups. One third of the Asian parents (38%), compared to between 70 and 88% of the Hispanic parents, indicated that the child had teachers who spoke his/her non-English language (Table 12). While Asian parents were least likely to report that their children had teachers who spoke their home language, Cuban parents were more likely than Mexican Americans and NAEP Puerto Rican parents to report that their children's teachers spoke Spanish.

Table 12

DO TEACHERS SPEAK YOUR CHILD'S NON-ENGLISH LANGUAGE
(In Schools Where Non-English Language is Used)**

	N	Yes % (SE)	No % (SE)	Don't Know % (SE)
Do Teachers Speak Non-English Language				
Asian	132	37.5(7.3)	53.7(7.5)	8.8 (4.3)
Mexican American	525	69.7(3.5)	18.4(2.9)	11.9 (2.4)
Puerto Rican(N)	168	69.7(6.1)	20.6(5.4)	9.7 (4.0)
Puerto Rican(S)*	204	84.8(4.4)	10.7(3.8)	4.5 (2.5)
Cuban*	335	88.4(3.0)	6.0(2.2)	5.7 (2.2)

*Supplementary Telephone Sample
**Based on the responses of 11% of the Asian sample, 58% of the Mexican American sample, 62% of the Puerto Rican (N) and 59% of the Puerto Rican (S) sample and 66% of the Cuban sample.

Children's Exposure to being taught in their Non-English language

Parents were asked whether their child's school provided special help to children who spoke their non-English language. A good portion of the parents did not know about the availability of special services for language minority students -- 45% of the Mexican Americans, 31 - 37% of the Puerto Ricans, 40% of the Cubans and 21% of the Asian parents said they didn't know. About a third of the parents indicated that such special help was available -- 27% of Asian and Cuban parents, 34% of Mexican American parents, 43% of NAEP Puerto Rican parents and 39% of the Puerto Rican parents in the supplemental survey.

Table 13 indicates the percent of children in such schools who received special language services. Sixty-one percent of the Asians, 51% of the Mexican Americans, between 34 and 41% of the Puerto Ricans and 49% of the Cubans, whose children were in schools where special services were available, indicated that their child had received some special service. Asian parents were more likely than Mexican American parents to know the nature of the help their children received. Of those who had ever received services, a third of the Asian students had been taught to read and write English using the non-English language and almost half (48%) had been taught math or other subjects using the non-English language, 45% of the Mexican Americans had been taught English literacy skills using Spanish and 32% had been taught other subjects in Spanish. The figures for Puerto Ricans were 47 to 57% taught English using Spanish and 30 to 46% taught other subjects in Spanish. Cubans (16%) were least likely of all groups, save Asians, to be taught to read and write English using their non-English language. They were the least

Table 13

CHILDREN'S EXPERIENCES WITH SPECIAL LANGUAGE SERVICES
(In Schools Where Special Services Were Available)

	N	Yes % (SE)	No % (SE)	Don't Know % (SE)
Has Child Gotten Special Language Services				
Asian	307	61.2(4.8)	37.8(4.8)	0.9(0.9)
Mexican American	301	51.0(5.0)	44.9(5.0)	4.2(2.0)
Puerto Rican(N)	132	41.3(7.4)	56.1(7.5)	2.6(2.4)
Puerto Rican(S)*	133	33.9(7.1)	65.2(7.2)	1.0(1.5)
Cuban*	144	48.6(7.2)	51.4(7.2)	0.0(0.0)
Child Ever Taught to Read/Write English Using Non-English Language				
Asian	208	32.7(5.6)	66.5(5.7)	0.8(1.1)
Mexican American	308	45.0(4.9)	41.4(4.9)	13.6(3.4)
Puerto Rican(N)	88	57.0(9.1)	29.3(8.4)	13.7(6.3)
Puerto Rican(S)*	75	47.4(10.0)	45.7(10.0)	6.9(5.1)
Cuban*	283	15.5(3.7)	80.6(4.1)	3.9(2.0)
Child Ever Taught Math/ Other Subjects Using Non-English Language				
Asian	208	47.6(6.0)	51.6(6.0)	0.8(1.1)
Mexican American	307	32.1(4.6)	55.2(4.9)	12.7(3.3)
Puerto Rican(N)	87	46.1(9.3)	38.2(9.0)	15.7(6.8)
Puerto Rican(S)*	77	29.9(9.0)	64.0(9.5)	6.1(4.7)
Cuban*	284	9.5(3.0)	85.9(3.6)	4.6(2.1)

*Supplementary Telephone Sample

likely of all groups to have been taught math or other subjects using the non-English languages. It must be borne in mind that the question about language of instruction is the result of considerable branching -- one must say "yes" to special services in the school, and "yes" to your child receiving such services, in order to be asked about the language used for such special services.

Children Currently Enrolled in a Special Language Program

We divided the sample randomly into three groups. We read a description to each group of one type of language program[6] -- maintenance bilingual, transitional bilingual or English immersion -- and then asked parents: 1. if they thought that was a good program for language minority students, 2. whether they thought it would be desirable for their child, and 3. whether their child was currently receiving such services. Table 14 indicates the services children were receiving. While the percentage responding is based on the random third, it may be extrapolated to 100%.

Hispanic students who were enrolled in a special language program were about equally likely to be in a maintenance bilingual, transitional bilingual or immersion program, but Asian students receiving special services were much more likely to be enrolled in an English immersion program than in a maintenance or transitional bilingual program.

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[6]See Appendix B, Question 73, p.15-16 of the survey instrument, for the precise description of each program.

Table 14

IS CHILD IN BILINGUAL, TRANSITIONAL OR IMMERSION PROGRAM?

	N	Yes % (SE)	No % (SE)	Don't Know % (SE)
Bilingual				
Asian	301	4.3(2.0)	88.5(3.2)	7.2(2.6)
Mexican-American	278	12.7(3.5)	69.6(4.8)	17.7(4.0)
Puerto Rican(N)	98	17.8(6.7)	79.1(7.1)	3.1(3.0)
Puerto Rican(S)*	113	17.2(6.1)	69.6(7.5)	13.3(5.5)
Cuban*	176	14.2(4.6)	68.2(6.1)	17.6(5.0)
Transitional				
Asian	260	3.6(2.0)	86.1(3.7)	10.3(3.3)
Mexican-American	298	20.6(4.1)	59.7(4.9)	19.7(4.0)
Puerto Rican(N)	95	11.4(5.6)	76.3(7.6)	12.2(5.8)
Puerto Rican(S)*	114	25.7(7.1)	58.8(8.0)	15.5(5.9)
Cuban*	147	12.2(4.7)	67.3(6.7)	20.4(5.8)
Immersion				
Asian	301	26.5(4.4)	56.3(5.0)	17.2(3.8)
Mexican-American	322	19.3(3.8)	60.2(4.7)	20.5(3.9)
Puerto Rican(N)	97	25.7(7.7)	60.6(8.6)	13.8(6.1)
Puerto Rican(S)*	113	28.2(7.3)	56.2(8.1)	15.6(5.9)
Cuban*	179	24.6(5.6)	50.3(6.5)	25.1(5.6)

*Supplementary Telephone Sample

Educational Outcomes

Objectives of Schooling

Parents were asked in an open-ended question to list the three most important things that they wanted their children to learn at school. Table 15 presents the responses. Learning academic subjects and learning English were the most frequently mentioned goals, followed by statements regarding learning in general and then learning discipline and social skills. The parent groups were generally quite similar in their responses. There were some notable differences however.

Asian, Mexican American, and Puerto Rican parents in the NAEP sample were more likely to rate the goal of their children learning English as "very important" than they were to rate the goal of their children learning their non-English home language "very important." Asians were significantly more likely than the supplemental sample of Puerto Ricans and Cubans to indicate learning English was a top priority. Furthermore, they were less likely than Mexican American or Cuban parents to see learning the non-English language as one of the three most important things a child should learn at school. Only a small percentage (4.3 - 22.3 depending on ethnic group) mentioned learning the non-English language in their top three educational goals for their children.

Speaking English and non-English well

Virtually all parents (97%) believe that it is very important to speak English well. There were significant differences, however, in

Table 15

WHAT ARE THE THREE MOST IMPORTANT THINGS YOU WANT YOUR CHILD TO LEARN AT SCHOOL?

Responses included in top 3	Asian % (SE)	Mexican American %(SE)	Puerto Rican(N) %(SE)	Puerto Rican(S)* %(SE)	Cuban* %(SE)
N	836	878	286	337	497
Learn English	50.9(3.0)	47.1(2.9)	39.7(5.0)	25.1(4.1)	36.2(3.7)
Learn Other Language	4.3(1.2)	10.1(1.8)	12.0(3.3)	13.6(3.2)	22.3(3.2)
Learn Both Language	0.4(0.4)	5.0(1.3)	1.9(1.4)	6.3(2.3)	5.2(1.7)
Learn Academic Subjects	66.0(2.8)	72.3(2.6)	71.2(4.6)	72.4(4.2)	68.8(3.6)
Learn Extras (e.g Art, Sports)	15.8(2.2)	9.0(1.7)	11.7(3.3)	10.9(2.9)	8.2(2.1)
Prepare for College	6.1(1.4)	2.8(1.0)	4.4(2.1)	1.5(1.1)	0.2(0.3)
Prepare for Work/ Career	9.1(1.7)	12.6(1.9)	20.9(4.2)	10.2(2.9)	9.2(2.3)
Learn General Education	25.7(2.6)	24.9(2.5)	30.8(4.7)	38.0(4.6)	35.4(3.7)
Learn Study Skills/ Attitudes	6.8(1.5)	6.5(1.4)	3.0(1.7)	7.1(2.4)	8.7(2.2)
Learn Discipline/ Work Habits	10.4(1.8)	9.9(1.7)	6.3(2.5)	12.9(3.2)	15.7(2.8)
Learn Social Skills/ Goals	12.6(2.0)	11.0(1.8)	12.4(3.4)	12.3(3.1)	8.9(2.2)
Learn Citizenship/ Culture	7.4(1.6)	3.0(1.0)	0.8(0.9)	0.4(0.6)	2.0(1.1)
Learn Religion/ Values	3.3(1.1)	2.7(1.0)	4.2(2.1)	2.2(1.4)	15.3(2.8)
Learn About Child's Ethnic Culture	0.7(0.5)	0.6(0.5)	1.0(1.0)	0.1(0.3)	0.4(0.5)

*Supplementary Telephone Sample

parents' belief in the importance of speaking the non-English language well. Asian parents were less likely than Hispanic parents to see learning the non-English language as very important. Three-quarters (75%) of the Mexican Americans, 78 to 92% of the Puerto Ricans and 95% of the Cubans indicated that speaking Spanish well was very important, but only slightly more than half of the Asians (53%) indicated that they thought it was very important for their child to speak the non-English language well. Indeed, 10% of the Asians, compared to less than 1% of the Mexican American parents and 4% of the Puerto Rican NAEP parents, believed it was not at all important for their children to learn to speak their non-English language well. (Table 16)

Table 16

HOW IMPORTANT IS IT FOR YOUR CHILD TO SPEAK ENGLISH AND NON-ENGLISH LANGUAGE WELL?

	N	Very Important % (SE)	Somewhat %(SE)	Not Important %(SE)
English				
Asian	867	97.4(0.9)	1.9(0.8)	0.5(0.4)
Mexican-American	902	97.3(0.9)	2.6(0.9)	0.1(0.2)
Puerto Rican(N)	290	98.7(1.2)	1.0(1.0)	0.3(0.6)
Puerto Rican(S)*	340	96.1(1.8)	3.4(1.7)	0.5(0.7)
Cuban*	502	99.6(0.5)	0.4(0.5)	0.0(0.0)
Non-English Language				
Asian	446	53.3(4.1)	36.9(4.0)	9.6(2.4)
Mexican-American	527	74.9(3.3)	23.7(3.2)	0.8(0.7)
Puerto-Rican(N)	205	78.3(5.0)	16.9(4.5)	4.1(2.4)
Puerto-Rican(S)*	203	91.6(3.4)	8.4(3.4)	0.0(0.0)
Cuban*	477	95.2(1.7)	4.6(1.7)	0.2(0.4)

*Supplementary Telephone Sample

Learning a non-English Language

While a great majority of the parents believed that the schools should teach all children a non-English language, Hispanic parents were considerably more enthusiastic about this goal than were Asians. (Table 17)

Table 17

SHOULD SCHOOLS TEACH ALL CHILDREN
A NON-ENGLISH LANGUAGE?

	N	Yes % (SE)	NO %(SE)	Don't Know %(SE)
Asian	866	61.8(2.9)	30.0(2.7)	8.2(1.6)
Mexican American	903	81.4(2.2)	13.0(1.9)	5.6(1.3)
Puerto Rican (N)	290	90.4(3.0)	7.9(2.7)	1.7(1.3)
Puerto Rican (S)*	340	95.1(2.0)	3.9(1.8)	1.0(0.9)
Cuban*	502	97.4(1.2)	1.2(0.8)	1.4(0.9)

*Supplementary Telephone Sample

Parental Preferences

Instructional Practices

Extra Help for Language Minority Children. Parents believed that children who speak another language should be given extra help in learning English and other subjects, but they felt more strongly about giving extra help in English than giving extra help for other subjects. Asian parents were less likely than Mexican American and Puerto Rican parents to believe in giving non-English speaking children extra help in learning English. Cubans were less supportive of extra help in English

than were Puerto Rican parents. Asian and Cuban parents were less enthusiastic about giving non-English children special help in other subjects than were Mexican American and Puerto Rican parents. (Table 18)

Table 18

SHOULD NON-ENGLISH SPEAKING CHILDREN BE GIVEN EXTRA HELP?

	N	Yes % (SE)	No %(SE)	Don't Know %(SE)
English				
Asian	865	63.7(2.8)	27.9(2.6)	8.4(1.6)
Mexican American	901	82.0(2.2)	9.9(1.7)	8.1(1.6)
Puerto Rican (N)	290	92.9(2.6)	5.7(2.4)	1.4(1.2)
Puerto Rican (S)*	339	94.7(2.1)	4.3(1.9)	1.0(0.9)
Cuban*	501	72.9(3.4)	19.8(3.1)	7.4(2.0)
Other Subjects				
Asian	863	40.4(2.9)	48.8(2.9)	10.8(1.8)
Mexican American	902	58.7(2.8)	24.3(2.5)	17.0(2.2)
Puerto Rican (N)	286	79.8(4.1)	12.3(3.4)	8.0(2.8)
Puerto Rican (S)*	338	84.9(3.4)	11.7(3.0)	3.4(1.7)
Cuban*	500	44.8(3.9)	44.4(3.8)	10.8(2.4)

*Supplementary Telephone Sample

Teaching in non-English Language. Hispanic parents were generally more enthusiastic about the use of non-English language in instruction for language minority children than were Asian parents. When asked whether they thought that teaching in the non-English language interferes with non-English students' learning of English, 60% of the Asians said "yes" but only 19% of Cuban parents said "yes." Asians were more likely than Mexican Americans, Cubans and Puerto Rican parents in the NAEP sample to believe that teaching in non-English interferes with learning English. (Table 19)

Table 19

DO YOU THINK TEACHING IN NON-ENGLISH LANGUAGE INTERFERES WITH LEARNING ENGLISH?

	N	Yes % (SE)	NO %(SE)	Don't Know %(SE)
Asian	865	60.0(2.9)	32.5(2.8)	7.6(1.6)
Mexican American	901	43.1(2.9)	50.5(2.9)	6.4(1.4)
Puerto Rican (N)	288	32.8(4.8)	61.7(5.0)	5.5(2.3)
Puerto Rican (S)*	340	53.8(4.7)	44.2(4.7)	2.0(1.3)
Cuban*	501	19.2(3.0)	78.8(3.2)	2.0(1.1)

*Supplementary Telephone Sample

When asked whether schools should teach science and math in the non-English language if it meant that the students would learn those subjects better, only 24% of the Asians compared to 37% of the Cubans, 47% of the Mexican Americans and 67 to 71% of the Puerto Ricans, indicated that this would be desirable. Puerto Ricans were the most enthusiastic about the use of Spanish in teaching math and science, followed by Mexican American parents, then Cubans, and least enthused of all groups -- Asians. (Table 20)

Table 20

SHOULD SCHOOLS TEACH MATH AND SCIENCE IN NON-ENGLISH LANGUAGE IF IT MEANS CHILDREN WILL LEARN THOSE SUBJECTS BETTER?

	N	Yes % (SE)	NO %(SE)	Don't Know %(SE)
Asian	838	23.6(2.5)	69.6(2.8)	6.8(1.5)
Mexican American	887	46.9(2.9)	39.9(2.8)	13.2(2.0)
Puerto Rican (N)	274	70.5(4.8)	19.5(4.1)	10.0(3.1)
Puerto Rican (S)*	340	67.0(4.4)	30.9(4.3)	2.1(1.3)
Cuban*	492	36.8(3.8)	57.1(3.9)	6.1(1.9)

*Supplementary Telephone Sample

Instructional Trade-offs. When asked whether language minority children should be taught their non-English language in school if it took away from learning English and other subjects, with the possible exception of the Puerto Rican supplemental sample, parents were overwhelmingly unenthusiastic about such instruction. They were slightly less negative in regard to the trade-off between art and music and teaching the non-English language, but very consistent in opposing substituting learning the non-English language if it meant less time for learning English, math or science. (Table 21)

Preference for Maintenance, Transitional and Immersion Programs

As mentioned earlier, the sample was randomly divided into three subsets and each subset was read a description of one of the following special programs:

> Q. 73 Now I am going to describe a program for teaching children who speak (non-English Language).
>
> Program 1: [Bilingual Maintenance]
> The (Non-English Language) speaking students would be taught in both (Non-English Language) and English. Half of the time the teacher would speak (Non-English Language) to the students, and the other half English would be spoken. All their basic subjects -- reading, math, and science -- would be taught in both languages. In other words, the basic idea is that (Non-English Language) speaking students would be taught in both language.
>
> Program 2: [Transitional]
> The (Non-English Language) speaking students would be taught their basic subjects -- reading, math, and science -- in (Non-English Language) and would receive special instruction on how to speak, read, and write in English. As their English improves, they would be taught less in (Non-English Language). When they had learned enough English they would switch to a regular classroom with English-speaking students in which all subjects would be taught in English. In other words, the basic idea is that (Non-English Language) will

Table 21

SHOULD SCHOOLS TEACH LANGUAGE MINORITY CHILDREN A NON-ENGLISH LANGUAGE IF IT MEANS LESS TIME FOR TEACHING THEM OTHER SUBJECTS?

	N	Yes % (SE)	NO %(SE)	Don't Know %(SE)
A. English				
Asian	866	10.8(1.8)	85.8(2.1)	3.4(1.1)
Mexican American	902	12.4(1.9)	78.1(2.4)	9.6(1.7)
Puerto Rican (N)	289	19.4(4.0)	74.9(4.4)	5.6(2.4)
Puerto Rican (S)*	340	41.5(4.6)	57.0(4.7)	1.5(1.1)
Cuban*	502	16.1(2.8)	82.5(2.9)	1.4(0.9)
B. Math				
Asian	867	11.0(1.8)	85.1(2.1)	3.9(1.1)
Mexican American	901	11.3(1.8)	78.6(2.4)	10.1(1.7)
Puerto Rican (N)	289	19.7(4.1)	76.4(4.3)	3.9(2.0)
Puerto Rican (S)*	340	43.7(4.7)	54.8(4.7)	1.5(1.1)
Cuban*	502	16.1(2.8)	82.3(3.0)	1.6(1.0)
C. Science				
Asian	866	10.8(1.8)	84.8(2.1)	4.4(1.2)
Mexican American	901	13.1(1.9)	74.8(2.5)	12.0(1.9)
Puerto Rican (N)	289	19.9(4.1)	76.1(4.3)	4.0(2.0)
Puerto Rican (S)*	340	44.3(4.7)	54.2(4.7)	1.5(1.1)
Cuban*	502	16.5(2.9)	81.7(3.0)	1.8(1.0)
D. Art				
Asian	866	16.2(2.2)	78.0(2.4)	5.7(1.4)
Mexican American	900	21.0(2.4)	64.8(2.8)	14.2(2.0)
Puerto Rican (N)	288	30.5(4.7)	64.6(4.9)	4.9(2.2)
Puerto Rican (S)*	340	45.0(4.7)	53.5(4.7)	1.5(1.1)
Cuban*	502	26.1(3.4)	71.5(3.5)	2.4(1.2)
E. Music				
Asian	865	16.9(2.2)	77.7(2.5)	5.4(1.3)
Mexican American	901	21.7(2.4)	64.5(2.8)	13.8(2.0)
Puerto Rican (N)	289	30.3(4.7)	64.9(4.9)	4.8(2.2)
Puerto Rican (S)*	340	46.5(4.7)	52.0(4.7)	1.5(1.1)
Cuban*	501	26.5(3.4)	71.3(3.5)	2.2(1.1)

*Supplementary Telephone Sample

only be used until they learn enough English to get by in a regular classroom.

Program 3: [Immersion]
The (Non-English Language) speaking students would be taught all basic subjects -- reading, math, and science -- in English. The teacher would speak only English. The (Non-English Language) speaking students would be taken out of this class from time to time and given special instruction in English on how to speak, read and write English. In other words, the basic idea is that all instruction would be in English, with additional special English language training.

After hearing about the program, parents were asked whether or not this would be a good program for students who don't speak English, and whether they would like their child to be in such a program.

We posed the question in this fashion to assure that we knew what education concepts parents were responding to and to avoid using labels ("bilingual", "transitional" and "immersion") that might not be meaningful to parents, or that might mean different things to different parents. Once the decision was made to use program descriptions rather than labels, we realized than to burden each parent with three such descriptions would be confusing, cumbersome and time consuming. In addition to the length problem, asking each parent about all three programs would have required randomizing the order in which the three programs were presented across the parent sample in order to avoid order effects, a procedures that we deemed to complicated in the context of the other demands on field staff. Given these problems, we opted to divide randomly the sample into thirds and asked each parent about one program only. The language of the question as well as the procedures we employed allowed us to replicate on a larger sample, a survey item used in the Cardoza et al. (1985) study.

Most parents were positive about the programs described to them (range 55% to 88% depending on the program and the group). However, Asian parents were significantly more enthusiastic about immersion programs for children who don't speak English than they were with bilingual maintenance programs. (Table 22)

When asked whether they would desire the program described to them for their own child, Asian and Hispanic parents indicated somewhat different preferences. Only a quarter of the Asian parents but more than half (56%) of the Mexican American parents, 45% of the Cubans and 46-56% of the Puerto Rican parents indicated that they would like to see their child enrolled in a bilingual program. This difference between Hispanic groups and the Asians was significant. There were also similar differences between Asians and Mexican American and Puerto Rican supplement parents on the desirability of transitional programs. While all groups were equally enthusiastic about immersion programs (35 - 48% depending on the group), Asian parents preferred immersion programs for their children more than bilingual maintenance or transitional programs. (Table 23)

Language of Instruction

Asian parents were more likely than all other groups to want non-English speaking students to be taught reading and writing in English. Mexican Americans were significantly more interested in only English instruction than were parents in the Puerto Rican supplement sample. When asked in what language children who speak a non-English language at home should be taught to read and write, two thirds of the Asians (67%)

Table 22

PARENTS' OPINIONS OF BILINGUAL, TRANSITIONAL AND IMMERSION PROGRAMS
(Would this be a good program for students who don't speak English?)

	N	Yes % (SE)	NO %(SE)	Don't Know %(SE)
Bilingual:				
Asian	304	54.8(4.9)	39.2(4.8)	6.1(2.4)
Mexican American	279	79.5(4.2)	18.0(4.0)	2.5(1.6)
Puerto Rican (N)	98	81.0(6.9)	16.8(6.5)	2.2(2.6)
Puerto Rican (S)*	113	85.4(5.8)	12.1(5.3)	2.5(2.6)
Cuban*	176	64.8(6.2)	29.5(6.0)	5.7(3.0)
Transitional:				
Asian	261	65.2(5.1)	31.9(5.0)	2.9(1.8)
Mexican American	301	85.2(3.5)	11.4(3.2)	3.4(1.8)
Puerto Rican (N)	95	88.4(5.7)	4.1(3.5)	7.5(4.7)
Puerto Rican (S)*	114	87.9(5.3)	10.6(5.0)	1.5(2.0)
Cuban*	147	70.7(6.5)	25.9(6.3)	3.4(2.6)
Immersion:				
Asian	298	80.8(3.9)	9.9(3.0)	9.3(2.9)
Mexican American	322	66.9(4.5)	27.8(4.3)	5.4(2.2)
Puerto Rican (N)	97	65.9(8.3)	24.5(7.6)	9.6(5.2)
Puerto Rican (S)*	113	72.0(7.3)	26.0(7.1)	2.0(2.3)
Cuban*	179	73.2(5.7)	23.5(5.5)	3.4(2.3)

*Supplementary Telephone Sample

Table 23

PARENTS' OPINIONS OF BILINGUAL, TRANSITIONAL AND IMMERSION PROGRAMS
(Would you like your child to be in this program?)

	N	Yes % (SE)	No %(SE)	Don't Know %(SE)
Bilingual:				
Asian	304	25.1(4.3)	71.9(4.5)	3.1(1.7)
Mexican American	279	55.9(5.1)	42.8(5.1)	1.3(1.2)
Puerto Rican (N)	98	45.6(8.7)	43.0(8.7)	11.4(5.6)
Puerto Rican (S)*	113	55.8(8.1)	41.0(8.0)	3.3(2.9)
Cuban*	176	44.9(6.5)	50.0(6.5)	5.1(2.9)
Transitional:				
Asian	260	25.3(4.7)	72.0(4.8)	2.8(1.8)
Mexican American	300	52.5(5.0)	42.8(4.9)	5.0(2.2)
Puerto Rican (N)	94	38.7(8.7)	61.3(8.7)	0.0(0.0)
Puerto Rican (S)*	114	55.3(8.1)	37.4(7.8)	7.3(4.2)
Cuban*	147	38.8(7.0)	53.7(7.1)	7.5(3.8)
Immersion:				
Asian	300	44.1(5.0)	50.8(5.0)	5.1(2.2)
Mexican American	321	44.5(4.8)	48.9(4.8)	6.6(2.4)
Puerto Rican (N)	97	34.8(8.4)	61.4(8.6)	3.8(3.4)
Puerto Rican (S)*	113	47.4(8.1)	51.0(8.1)	1.6(2.0)
Cuban*	178	48.3(6.5)	44.9(6.5)	6.7(3.3)

*Supplementary Telephone Sample

indicated only in English, whereas 28% of the Mexican Americans, 16 - 21% of the Puerto Ricans and 20% of the Cubans opted for exclusive use of English. Between 70 and 82% of the Hispanic parents, but only one third of the Asians felt that non-English speaking children should be instructed in both English and their non-English language. When asked about the language of instruction to be used in teaching basic subjects, parents preferences were quite comparable to those regarding instruction in reading and writing English, with the exception that Cubans, like the Asian parents, were more enthusiastic about exclusive use of English instruction for math and science. (Table 24)

Table 24

IN WHAT LANGUAGE SHOULD NON-ENGLISH STUDENTS BE TAUGHT?

	N	Only in English % (SE)	In Both English & Non-English %(SE)	Only in Non-English %(SE)
Read & Write				
Asian	866	67.1(2.8)	32.0(2.7)	0.1(0.2)
Mexican-American	902	28.3(2.6)	69.8(2.6)	0.0(0.0)
Puerto Rican(N)	290	21.4(4.2)	77.3(4.3)	0.8(0.9)
Puerto Rican(S)*	340	16.3(3.5)	82.1(3.6)	1.2(1.0)
Cuban*	502	20.1(3.1)	79.5(3.1)	0.0(0.0)
Basic Subjects				
Asian	866	68.2(2.7)	29.5(2.7)	0.1(0.2)
Mexican-American	903	38.7(2.8)	56.3(2.9)	0.0(0.0)
Puerto Rican(N)	289	28.8(4.6)	69.5(4.7)	1.1(1.0)
Puerto Rican(S)*	340	26.7(4.2)	70.5(4.3)	1.4(1.1)
Cuban*	502	50.2(3.9)	48.0(3.9)	0.8(0.7)

*Supplementary Telephone Sample

Responsibility for Instruction

Parents were asked whether the family or the school should be the social institution primarily responsible for teaching children to speak English, to read and write English, to speak their non-English language, to read and write their non-English language and to provide information about the history and tradition of their ancestors. Table 25 presents the findings. The vast majority of parents believe that the school has the primary responsibility for teaching language minority children to speak, read and write English (range from 70% to 97% depending on the question and the ethnic group). Asian and Cuban parents held the school mainly responsible for teaching children to speak English significantly more often than did Mexican American and Puerto Rican parents. There were no significant differences among the groups as to the responsibility of the school to teach children to read and write English. There was considerable disagreement in regard to learning to speak the non-English language. In contrast to teaching English, a substantial proportion of all groups believed that the family was mainly responsible for this task (85% of the Asian parents down to 53% of the Cubans). Asian parents (10%) were less likely than all groups to hold schools responsible for teaching children to speak the non-English language spoken at home. Cuban parents were more likely than Mexican American parents and Puerto Rican parents in the supplement to hold the school responsible for teaching children to speak the non-English home language. While the Asians felt the same way about literacy skills in their non-English language, a significantly larger portion of Hispanic parents (range 46 to 53%) felt the school should teach literacy in Spanish than had felt that the school had the main responsibility for teaching children to speak Spanish.

Table 25

WHO HAS THE MAIN RESPONSIBILITY FOR TEACHING CHILDREN?

	N	Schools % (SE)	Families %(SE)
A. To Speak English			
Asian	853	88.0(1.9)	11.0(1.9)
Mexican-American	900	74.8(2.5)	24.4(2.5)
Puerto Rican(N)	289	80.1(4.1)	17.7(3.9)
Puerto Rican(S)*	340	70.7(4.3)	29.2(4.3)
Cuban*	592	93.4(1.9)	6.4(1.9)
B. To Read & Write English			
Asian	852	93.5(1.5)	6.0(1.4)
Mexican-American	902	88.1(1.9)	11.6(1.8)
Puerto-Rican(N)	289	87.4(3.4)	10.9(3.2)
Puerto-Rican(S)*	340	82.2(3.6)	17.8(3.6)
Cuban*	501	96.8(1.4)	3.0(1.3)
C. To Speak Non-English			
Asian	859	9.9(1.8)	84.7(2.1)
Mexican-American	896	28.0(2.6)	69.3(2.7)
Puerto-Rican(N)	289	36.0(4.9)	60.1(5.0)
Puerto-Rican(S)*	340	30.0(4.3)	69.0(4.3)
Cuban*	502	46.4(3 9)	53.4(3.9)
D. To Read & Write Non-English			
Asian	863	10.3(1.8)	80.8(2.3)
Mexican-American	896	47.8(2.9)	49.2(2.9)
Puerto-Rican(N)	289	47.9(5.1)	48.0(5.1)
Puerto-Rican(S)*	340	46.3(4.7)	53.3(4.7)
Cuban*	501	53.1(3.9)	46.7(3.9)
E. About History & Tradition of Ancestors			
Asian	861	16.0(2.2)	80.4(2.3)
Mexican-American	897	27.9(2.6)	68.1(2.7)
Puerto-Rican(N)	289	24.8(4.4)	74.4(4.4)
Puerto-Rican(S)*	340	21.0(3.8)	77.6(3.9)
Cuban*	500	11.6(2.5)	88.0(2.5)

*Supplementary Telephone Sample

Similar to teaching the non-English language, the vast majority of parents (range 68 to 88%) felt the family was the institution with the main responsibility to teach children about their history and traditions.

Summary of Descriptive Findings

There were considerable demographic and language competency differences among the various groups:

- o Asian and Cuban parents are more likely to be born outside the United States than Mexican American and Puerto Rican respondents. Asian and Cuban parents also tend to report more education and higher family income than the other groups, with Asians being the most likely to hold advanced degrees and Puerto Ricans and Mexican American parents the most likely not to have graduated from high school.

- o While there were many similarities between the two Puerto Rican samples, there were some slight differences. The Puerto Rican parents in the supplementary sample were somewhat more likely than the NAEP Puerto Rican parents to have been born in the United States (24 versus 11%), to be better educated (33 versus 24% reporting education beyond high school), to be employed in higher status occupations (for example 13% versus 5% in technical;managerial positions), and to have higher incomes (17 versus 10% earning $30,000 or more per year).

- o Parent assessments of their competency in English -- speaking, understanding, reading and writing -- and in their non-English language literacy are commensurate with the differentials in their education levels. While a third of the parents judge themselves as very competent in English, Mexican American parents are more likely than all groups to report no competence in English. Similarly, three quarters of the Asian and Cuban parents indicated a high degree of literacy in their non-English language, whereas closer to 50% of the Mexican American and Puerto Rican parents so rated themselves, and 20% of the Mexican American parents indicated that they were illiterate in Spanish.

- o The vast majority of parents (more than 85%) rated their children as being very good or pretty good in English skills, e.g. speaking, understanding, reading and writing

English, but with the exception of Cuban parents, less than 40% of the parents rated their children's skills in their non-English language as very good or pretty good, and more than a quarter of the Asians rated their children's abilities in the non-English language as "not at all".

There were also differences among the ethnic groups concerning the experiences their children had with use of the home language in school. While these findings must be interpreted with caution due to the large number of parents in all ethnic groups who were unsure or unaware of school policies and practices and responded "I don't know" to the questions, the results indicated:

- o Asians students are much less likely than Hispanic students to attend schools where their home language is used. There are no differences in the likelihood of Spanish being used in the schools that Mexican American, Puerto Rican or Cuban youngsters attend.

- o Of language minority students currently enrolled in a special program, immersion programs were most readily available to Asian students. There were not such apparent differences for the Hispanic students.

Despite dissimilarities in background characteristics, the parents show many similarities in educational goals for their children. Often the differences are more in degree than in substance.

- o All parents first and foremost want their children to achieve in school and learn English, although Asians are significantly more likely to mention learning English as one of the three most important objectives of schooling. They are less likely than Mexican American and Cuban parents to mention teaching the non-English language as a high priority for schools.

- o Asian and Hispanic parents all overwhelmingly agree on the responsibility of the school to teach children English language skills, but Asians are less likely than the Hispanic groups to hold the schools responsible for teaching children to speak, read and write their non-English language.

- o While a large majority of parents believe that it is the family's responsibility to teach children about the history

and tradition of their ancestors, Puerto Rican and Mexican American parents were more likely than Cuban and Asian parents to assign that task to schools.

In terms of preferences for special language programs and instruction in the non-English language, we find:

- o Generally Asians are less enthusiastic than Hispanics for the use of non-English in instruction. In reading and writing instruction for students who use a non-English language at home, Asians are more in favor of the use of English than are Hispanic parents. And in instructing those students in the basics, such as science and math, Asian parents are more likely to desire English than other Hispanic groups, with the exception of Cuban parents.

- o When asked about bilingual, transitional or immersion programs for students who speak a non-English language at home, again we find the most significant differences in preference to be between Asian parents and all the Hispanic groups. The majority of parents felt that students who spoke a language other than English at home should get special help, and when presented with a description of either a bilingual maintenance, transitional bilingual or immersion language program, Asians were more enthusiastic about immersion programs than about maintenance or transitional programs. They were also less enthusiastic about maintenance programs than were the other Hispanic parents with the exception of Cubans.

The descriptive findings reveal that Hispanic and Asian parents are very different on many of the factors likely to influence parent preference and objectives for schooling. Their background characteristics -- education, income and immigration histories -- are quite different and may well play a role in determining their preferences. It is important, as we extend our analyses regarding parent beliefs, that we make an effort to separate out those aspects of preference that may be related to unique cultural patterns and those that are more likely to be influenced by such variables as educational attainment, income, years in this country, and opportunities for assimilation. Chapter Five considers this issue.

CHAPTER FIVE - RELATIONAL ANALYSIS

Introduction

The purpose of the analyses presented here is to examine the background, home support, language competence, and school experiences of parents and their children to learn how such variables are related to parental language program preferences, and to achievement as measured by parent report of grades in school, and where available NAEP math achievement. The report The Educational Progress of Language Minority Children: Findings from the NAEP 1985-86 Special Study (Baratz-Snowden et al., 1988) investigated the relationships among student reports of their attitudes and behaviors and various achievement outcomes. That report documented a number of differences between language groups on the achievement outcomes after controlling for salient background variables as well as other possible confounding sources of variance. The NAEP report relied on student reports of family and parental characteristics and behaviors, and to the extent that some of these reports may be in error, some of the estimates of the relationships involving these variables may be attenuated.

Baratz-Snowden, Pollack and Rock (1988) in a comparison of student/parent responses to the same or similar background and educational process questions found some significant discrepancies. Not unexpectedly, the extent of the student/parent discrepancies tends to

increase as the age of the student informant decreases. In addition to questions of validity of student responses, the NAEP study was limited in that certain potentially relevant information was simply not asked of students, e.g., family income and immigration history. The omission of such variables as parental income from the student regression equations in the earlier report may have led to undercontrolling for pre-existing group differences on this variable.

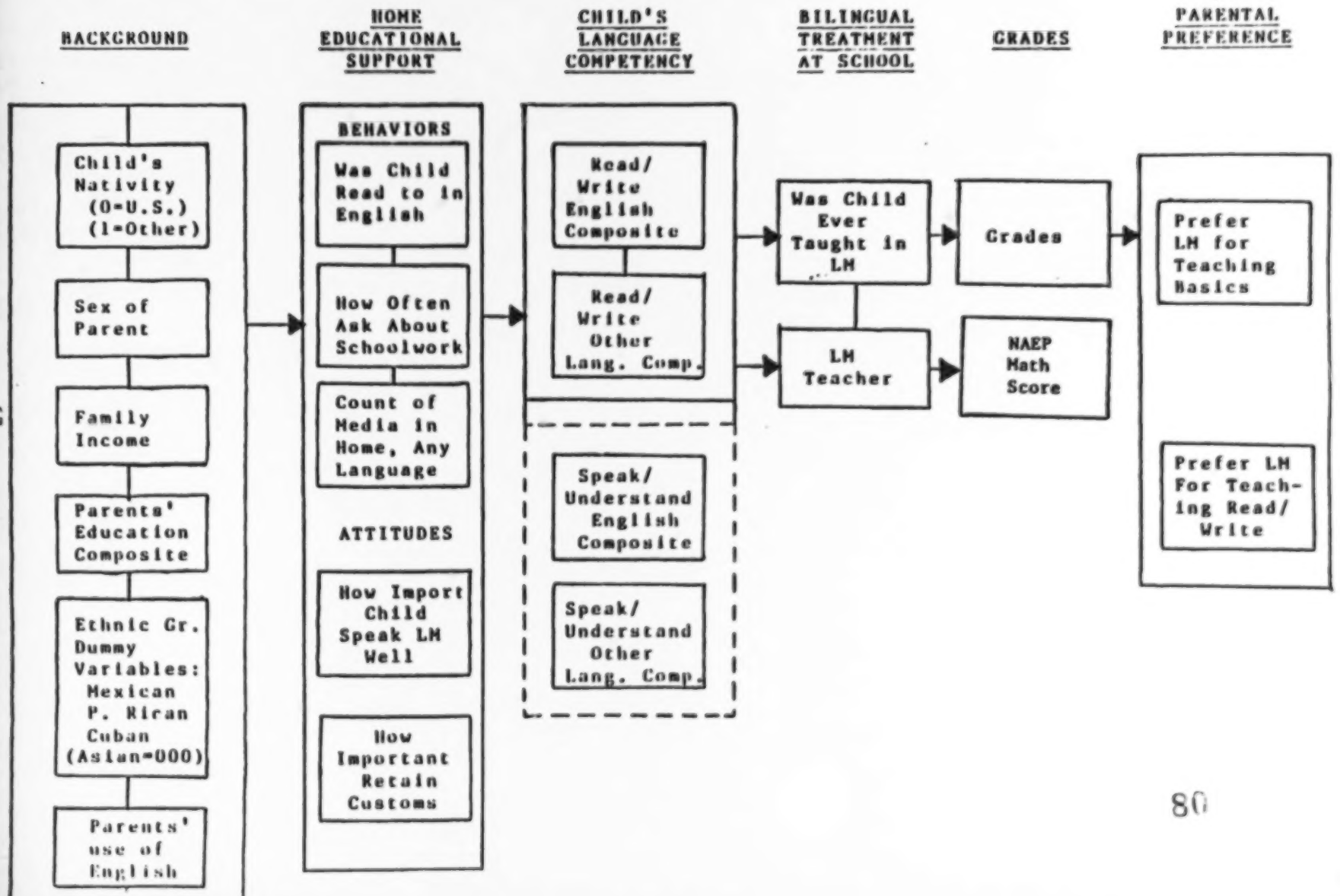
Sample

We have four groups -- Asians, Mexican Americans, Cubans and Puerto Ricans. In the regressions analyses presented here, we simultaneously control for many of the variables that are either directly or indirectly related to the sampling strata. Thus, we feel more comfortable using unweighted data and combining the NAEP and the supplemental parent preference samples.

Model

Figure 1 presents the general model that will be explored within a multiple regression framework. The model involves general categories of family background variables which are assumed to be related to parental attitudes and behaviors. In turn both the family background and parental attitudes and behaviors are assumed to influence their child's language competence and performance in school as measured by grades and tested achievement. Finally, all these variables are assumed to be related to parent program and instructional preferences.

FIGURE 1


BACKGROUND
HOME EDUCATIONAL SUPPORT
CHILD'S LANGUAGE COMPETENCY
BILINGUAL TREATMENT AT SCHOOL
GRADES
PARENTAL PREFERENCE
Child's Nativity (0=U.S.) (1=Other)
Sex of Parent
Family Income
Parents' Education Composite
Ethnic Gr. Dummy Variables: Mexican P. Rican Cuban (Asian=000)
Parents' use of English
BEHAVIORS
Was Child Read to in English
How Often Ask About Schoolwork
Count of Media in Home, Any Language
ATTITUDES
How Import Child Speak LM Well
How Important Retain Customs
Read/ Write English Composite
Read/ Write Other Lang. Comp.
Speak/ Understand English Composite
Speak/ Understand Other Lang. Comp.
Was Child Ever Taught in LM
LM Teacher
Grades
NAEP Math Score
Prefer LM for Teaching Basics
Prefer LM For Teaching Read/ Write

The variables included in this model were selected according to two criteria:

1. variables with correlation coefficients that revealed non-trivial relationships with one or more of the intermediate or final outcomes; and,

2. variables that were substantively relevant to the categories of interest as defined in the statement of purpose.

Furthermore, when pairs of questionnaire items were highly correlated, to minimize interpretation problems stemming from excessive collinearities, either we selected only one of the items or we formed composite scales.

The demographic variables that appear on the far left of the model are considered to be exogenous variables whose causes if known are outside the immediate system. While the arrows describe what are to be considered the independent and dependent variables in a particular regression equation, no claim is made that the resulting regression estimates are the "true" structural parameters in a causal scheme. The path analysis framework simply provides an orderly way of summarizing and comparing the relative importance of various explanatory variables when evaluated against multiple outcomes.

Figure 2 presents the variables included in the path analysis for each age level and an explanation of their coding. There are a number of home support variables that were not included in the descriptive analysis. They are: Was child read to in English before starting school? How often did parent ask about school work? and finally, a count of media (newspapers, magazines, books and records and tapes) in home in any language. In addition, the NAEP math score is used as an

FIGURE 2

VARIABLES AND CODING SCHEME
FOR PATH ANALYSIS

C NAT O	Q11. WHERE WAS CHILD BORN? (OTHER COUNTRY)	0=U.S., 1=OTHER COUNTRY
FATHER	RESPONDING PARENT IS FATHER	0=MOTHER, 1=FATHER, OTHER=BLANK
INCOME	Q13b. TOTAL YEARLY FAMILY INCOME	1= < $3000 ... 5=$7500+
PAR EDUC	PARENT EDUCATION COMPOSITE	1=0-6 YRS ... 5=GRADUATE DEGREE
MEXICAN	Q43/84: DUMMY VAR: IS PARENT MEXICAN?	1=MEXICAN, 0=ALL OTHERS
MATHSCOR	STUDENT'S SCORE ON MACP MATH TEST: PERCENT CORRECT	
CUBAN	Q43/84: DUMMY VAR: IS PARENT CUBAN?	1=CUBAN, 0=ALL OTHERS
P S/U E	PARENT SPEAK/UNDERSTAND ENGLISH (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
P LIT O	PARENT'S LITERACY IN OTHER LANGUAGE (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
P USE E	PARENT'S USE OF ENGLISH (COMPOSITE)	1=OTHER ONLY ... 5=ENGLISH ONLY
R TO ENG	Q37. WAS CHILD READ TO BEFORE STARTING SCHOOL?	1=YES, IN ENGLISH ONLY; 0=OTHER OR NOT AT ALL
ASK S WK	Q35. HOW OFTEN DO YOU ASK CHILD ABOUT SCHOOL WORK	1=NEVER ... 6=ALMOST EVERY DAY
# MEDIA	COUNT OF NEWS, MAGS, BOOKS, TAPES; ANY LANGUAGE (Q.40)	COUNT: 0-6 ITEMS (ANY LANGUAGE)
C S/U E	CHILD SPEAK/UNDERSTAND ENGLISH (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
C R/W E	CHILD READ/WRITE ENGLISH (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
C S/U O	CHILD SPEAK/UNDERSTAND OTHER (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
C R/W O	CHILD READ/WRITE OTHER (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
C E COMP	CHILD'S COMPETENCY IN ENGLISH (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
C O COMP	CHILD'S COMPETENCY IN OTHER LANGUAGE (COMPOSITE)	1=NOT AT ALL ... 6=VERY WELL
TCHRS LN	Q32. DO ANY OF CHILD'S TEACHERS SPEAK NON-ENG LANG	0=NO, 1=YES (=NO IF SKIPPED Q48 Q51=NO)
LN EVER	Q35. CHILD EVER TAUGHT IN NON-ENG LANG AT SCHOOL	0=NO, 1=YES (=YES IF SKIPPED AND LN IS NOW USED)
PREF LN	Q46. LANGUAGE PREFERENCE FOR TEACHING BASICS	1=ENGLISH ONLY; 2=BOTH; 3=LN ONLY
PREF RW	Q49. LANGUAGE PREFERENCE FOR TEACHING READING/WRITING	1=ENGLISH ONLY, 2=BOTH, 3=LN ONLY
IMP SP O	Q29. HOW IMPORTANT FOR CHILD TO LEARN TO SPEAK OTHER	1=NOT AT ALL ... 3=VERY IMPORTANT
TCH ALL	Q49. SHOULD SCHOOL TEACH ALL CHILDREN A NON-ENG LANG	0=NO, 1=YES
GRADES	Q31. CHILD'S GRADES DURING THE LAST SCHOOL YEAR:	1=BELOW D ... 6=ALL A'S
AGE 13	CHILD'S AGE= GRADE 7/AGE 13 (SUPPL SAMPLE 11-15)	1= AGE 13, 0=OTHER AGE
AGE 17	CHILD'S AGE= GRADE 11/AGE 17 (SUPPL SAMPLE 16-20)	1= AGE 17, 0=OTHER AGE
GOOD PRG	IS THIS A GOOD PROGRAM FOR LM CHILDREN	
LIKE PRG	WOULD YOU LIKE YOU CHILD TO BE IN THIS PROGRAM	
IN PROG	IS YOUR CHILD IN THIS PROGRAM	

achievement measure where available. The score represents the percent of items correctly answered at each grade. In grade three the percent is based on 18 items, in grade seven the percent is based on 22 items and in grade 11 the percent is based on 28 items.[7]

Relational Analysis Plan

The previous NAEP report (Baratz-Snowden et al, 1988) in which the student was the unit of analysis showed fairly large performance differences between the Asian language minority children and the remaining groups. The question then arises, "Do the parents of Asian language minority children have different expectations and attitudes about the role that schooling in general should play in the education of their children?"

And more specifically, "Do Asian parents see a different and/or lesser role for special language programs in the education of their children as compared to other language groups? Are these differences in preference of the role of special language programs related to achievement outcomes?" If the answer to these questions is "no", then we have made little progress with respect to understanding why the groups show these performance differences. If the answers to these questions are "yes," then we can generate informed hypotheses concerning the potential importance of differences among parents with respect to

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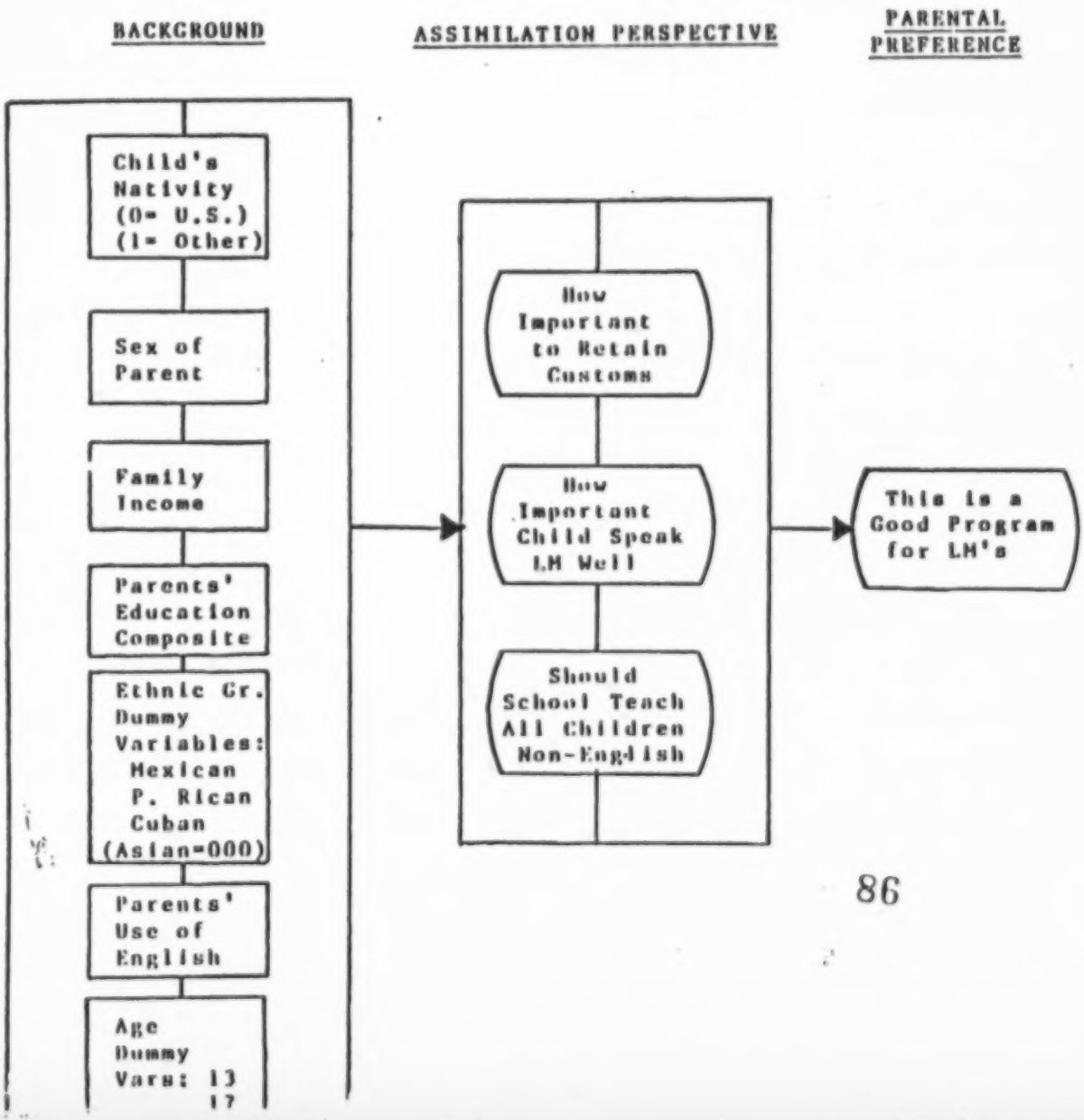
[7]For more details on the NAEP assessment, including scoring procedures and items, see: Baratz-Snowden, J., Rock, D., Pollack, J. and Wilder, G. The Educational Progress of Language Minority Children: Findings from the NAEP 1985-86 Special Study. NAEP/ETS: Princeton, NJ, 1988.

their desire for their children to be assimilated into the greater society and how such parent preferences are related to their child's achievement.

But even if we could demonstrate that controlling for differences in parental attitudes towards education significantly reduces the performance disparity between Asian and other language minority children, we would be on statistically "thin ice" to attribute cause and effect to this relational finding. At the same time, common sense would suggest that such differences in attitudes, if they exist, may well play an indirect if not direct causal role in explaining some part of the performance differences.

In order to address these and related questions, variations of the model in Figure 1 will be estimated within each age group respectively. In addition, because the survey collected data on parent opinion of particular types of bilingual programs -- bilingual maintenance, bilingual transition and bilingual immersion -- by randomly dividing the respondents into thirds and describing one of the programs to each third, we have developed an additional path analysis model to discover background and attitude relationships with preference for such programs (Figure 3). In order to accommodate the reduced sample size, age groups were combined, using dummy variables to detect age related effects, and fewer variables were included in this model. As with the first model, we chose variables with correlation coefficients that revealed non-trivial relationships with parent preferences and/or were substantively related to the outcomes. While the two path models and their variations provide a framework for selecting the relevant regressions to be

FIGURE 3


BACKGROUND
ASSIMILATION PERSPECTIVE
PARENTAL PREFERENCE
Child's Nativity (0= U.S.) (1= Other)
Sex of Parent
Family Income
Parents' Education Composite
Ethnic Gr. Dummy Variables: Mexican P. Rican Cuban (Asian=000)
Parents' Use of English
Age Dummy Vars: 13 17
How Important to Retain Customs
How Important Child Speak LH Well
Should School Teach All Children Non-English
This is a Good Program for LH's

analyzed, the typical path analysis step of estimating indirect effects will not be carried out. It is our opinion that the formal estimation of indirect effects from cross-sectional survey data is of questionable value.

Results

Dummy codes are used in all regressions to contrast the language minority group means on each of the dependent variables. In these regressions the first contrast group is the Asians, thus all ethnic comparisons on the outcome variables are based on contrasts with the Asian group. By contrasting all other groups with Asians using "dummy" variables, we can statistically test whether mean performance differences remain after controlling for possible differences between Asians and others on background, parental attitudes, and behaviors. This analysis parallels the approach used in the earlier student based NAEP language minority report. When a regression weight associated with a particular Hispanic ethnic group is positive, it indicates that the mean for that particular group is higher than the mean for the Asian group. Conversely, if the regression weight is negative, it indicates that the group in question has a lower mean than the Asian group.

The second contrast omits Asians and uses Puerto Ricans as the contrast group. The final analysis omits Asians and uses Cubans as a contrast. Thus, with these three contrasts we can determine ethnic differences among all groups.

Mean differences between ethnic groups on a given outcome are significant at alpha of .05 if the "t" statistic is equal to or greater than 1.96. We applied a .05 level of significance here, rather than the .01 criterion used in the descriptive results, since this analysis was limited to interpreting relationships based on an *a priori* model. The standard errors used in the statistical tests assume a sample design effect of 3.0 (i.e., the present sample design is assumed to be about one-third as efficient as a simple random sample). While this design effect may appear to be conservative, its size is consistent with design effects developed as part of an experimental simulation using similarly clustered NAEP samples (Johnson, 1988).

Each table presents both the standardized regression weights (Column 1, labeled Beta-wt) and the raw score regression weights (Column 3, labeled B - wt) along with their standard errors and "t" statistics. When the term "significant relationship" is used in the text, it simply means that a statistically significant relationship has been found between a given explanatory variable and the dependent variable. The tables in the text present the data for the Asian contrast. Parallel contrasts among Hispanics, with Asians omitted, are in Appendix C. In the results section, we first discuss the contrast between Asians and Cubans, Mexican Americans and Puerto Ricans and then we discuss ethnic differences, if any, among the Hispanic subgroups. In general our interpretations emphasize those significant explanatory variables that replicate across two or more age groupings.

Some of the outcome variables are dichotomous and in at least one case may be considered trichotomous and, thus, in violation of some of

the assumptions underlying classical least squares (OLS) estimation theory. Alternatives such as the logistic regression are ordinarily preferred on a theoretical basis but present computer programs cannot easily accommodate missing data. Given the relatively small samples, the application of the listwise deletion procedures that are employed in commercially available logistic regressions routines would lead to unacceptably small sample sizes. Fortunately, except when the split on the outcome proportions is quite extreme, the OLS estimate will generally yield the same rank ordering of effect sizes. However, extreme caution should be used in interpreting standard errors, "t - statistics" and significance values in these settings.

Home Educational Support Variables

This section examines the relationship between family demographics and various home educational support behaviors. We also investigate the relationship between demographics and parental attitudes towards the importance of their children's learning to speak the home language, and the significance of retaining the customs of their ancestors.

Behavioral Home Support Variables

The behavioral variables examined are: child's early experiences of being read to; parent asking about schoolwork; and, education related media items available in the home.

Was Child Read to in English? Inspection of Table 26 shows, not surprisingly, that children who were born outside the United States and whose parents were less fluent in English were less likely to be read to in English when younger. That is, the regression weights associated with these two explanatory variables were significant for all three age groupings. Except for the Cuban group, there were no significant differences between Hispanics and Asians with respect to this reading behavior. The Cuban group was more likely than the Asians (with the exception of parents of children aged 9) to report that they either did not read to the child or that they read to the child in a language other than English.

Within the Hispanic groups, we note that Cubans were also less likely than Mexican American and Puerto Rican parents (with the exception of Puerto Rican parents of 9 year olds) to have read to their children in English. There were no differences between Mexican American and Puerto Rican parents in regard to this reading behavior (Table 26, Appendix C).

How Often does the Parent ask Child About School Work? In general this outcome was rather poorly predicted with multiple correlations ranging from .22 to .32 depending on the age group (Table 27). In addition, the interpretation is not so straightforward in the sense that a parent may be as likely, if not more likely, to ask a child about school work if the child is not doing well. In those cases where the child is doing quite well, the parent may not need to inquire about the child's progress in school. Puerto Rican parents are more likely to

TABLE 26
DEPENDENT VARIABLE: "R TO ENG"
Q37. WAS CHILD READ TO BEFORE STARTING SCHOOL
1=YES, IN ENGLISH ONLY; 0=OTHER OR NOT AT ALL

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1803				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C HAT O	-0.155	-2.844	-0.169	0.059	-0.201	-4.052	-0.198	0.049	-0.259	-4.254	-0.245	0.058
FATHER	-0.068	-1.837	-0.101	0.055	-0.054	-1.318	-0.059	0.045	-0.046	-0.935	-0.048	0.051
INCOME	0.075	1.269	0.020	0.016	0.054	1.092	0.014	0.013	0.130	2.096	0.034	0.016
PAR EDUC	0.047	0.774	0.016	0.021	0.068	1.335	0.023	0.017	0.011	0.175	0.003	0.020
MEXICAN	0.020	0.283	0.020	0.070	0.065	1.132	0.068	0.060	-0.032	-0.507	-0.035	0.069
P RICAN	-0.033	-0.527	-0.040	0.076	0.028	0.502	0.031	0.063	-0.009	-0.138	-0.010	0.075
CUBAN	-0.107	-1.616	-0.151	0.083	-0.128	-2.478	-0.156	0.063	-0.168	-2.833	-0.223	0.079
P USE E	0.416	7.417	0.148	0.020	0.391	7.775	0.143	0.018	0.351	5.625	0.122	0.022
MULT R	0.5697				0.6127				0.5988			

(DESIGN EFFECT = 3)

TABLE E7
DEPENDENT VARIABLE: "ASK S HK"
Q33. HOW OFTEN DO YOU ASK CHILD ABOUT SCHOOL WORK
1=NEVER ... 4=ALMOST EVERY DAY

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C HAT 0	-0.075	-1.169	-0.079	0.067	0.011	0.182	0.013	0.074	-0.005	-0.074	-0.009	0.123
FATHER	-0.146	-2.587	-0.161	0.062	-0.165	-3.330	-0.226	0.068	-0.101	-1.694	-0.184	0.109
INCOME	-0.001	-0.007	0.000	0.018	0.060	1.005	0.020	0.020	0.062	0.812	0.028	0.034
PAR EDUC	0.165	2.312	0.055	0.024	0.136	2.229	0.058	0.026	0.056	0.761	0.032	0.042
MEXICAN	0.149	1.793	0.143	0.080	0.195	2.842	0.259	0.091	0.109	1.437	0.211	0.147
P RICAN	0.153	2.067	0.178	0.086	0.245	3.734	0.353	0.094	0.196	2.548	0.408	0.160
CUBAN	0.070	1.021	0.096	0.094	0.164	2.650	0.251	0.095	0.052	0.726	0.122	0.168
P USE E	-0.046	-0.694	-0.016	0.023	0.002	0.034	0.001	0.028	0.000	-0.001	0.000	0.046
MULT R		0.2678				0.3228				0.2221		

(DESIGN EFFECT = 3)

78

report this behavior than Asians. Fathers of children 9 and 13 are less likely than mothers to ask about school work.

Count of Newspapers, Books, etc in the Home. Parents' education (that is, parents with children age 9 and 13) and family income (that is, parents with children 13 and 17) showed significant positive relationships with this outcome (Table 28). Only one ethnic group difference showed up and that was that the Puerto Rican parents of children aged 9 and 13 report more media in the home than do the Asians. Those Puerto Rican parents also report that they have significantly more media supports in the house than do their Mexican American and Cuban counterparts (Table 28, Appendix C).

Attitudinal Home Support Variables

This section deals with parents' attitudes towards their children learning their native language and retaining native customs.

How Important is it for Child to Speak Native Language? The striking finding in Table 29 is that all Hispanic parent groups, with the exception of Mexican American parents of 17 year olds, are more likely than the Asians to feel that it is very important for the children to learn to speak their native language. The size of these effects are rather impressive considering that we have statistically controlled for income, education, and parents use of English as well as other variables in the equation. There appears to be a cultural difference between the Asian and Hispanic parents with respect to having their children maintain their native language. The only significant ethnic difference among the Hispanic groups on this variable was that of

TABLE 28
DEPENDENT VARIABLE: "# MEDIA"
Q80. COUNT OF NEWSPAPERS, MAGAZINES, BOOKS AND TAPES IN THE HOME, ANY LANGUAGE

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C HAT 0	-0.040	-0.988	-0.133	0.135	-0.098	-1.686	-0.188	0.112	0.007	0.108	0.012	0.117
FATHER	-0.087	-1.611	-0.201	0.124	-0.062	-1.274	-0.131	0.103	-0.058	-0.999	-0.103	0.103
INCOME	0.109	1.647	0.060	0.036	0.124	2.134	0.065	0.030	0.226	3.076	0.100	0.033
PAR EDUC	0.203	2.974	0.141	0.047	0.176	2.950	0.117	0.040	0.064	0.889	0.035	0.040
MEXICAN	0.098	1.243	0.199	0.160	0.001	0.014	0.002	0.138	0.006	0.080	0.011	0.139
P RICAN	0.184	2.603	0.449	0.172	0.156	2.431	0.347	0.143	0.089	1.196	0.182	0.152
CUBAN	-0.023	-0.355	-0.067	0.189	-0.021	-0.344	-0.049	0.143	-0.053	-0.756	-0.120	0.159
P USE E	0.121	1.927	0.088	0.045	0.085	1.450	0.061	0.042	0.104	1.407	0.062	0.044
MULT R		0.3988				0.3786				0.3202		

(DESIGN EFFECT = 3)

TABLE 29
DEPENDENT VARIABLE: "IMP SP O"
Q29. HOW IMPORTANT FOR CHILD TO LEARN TO SPEAK OTHER LANGUAGE
1=NOT AT ALL ... 3=VERY IMPORTANT

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C HAT O	-0.053	-0.868	-0.060	0.069	-0.080	-1.375	-0.074	0.054	-0.035	-0.495	-0.037	0.074
FATHER	-0.098	-1.795	-0.115	0.064	-0.092	-1.903	-0.094	0.049	-0.084	-1.473	-0.096	0.065
INCOME	0.094	1.400	0.026	0.019	0.031	0.534	0.008	0.015	0.008	0.113	0.002	0.021
PAR EDUC	-0.003	-0.040	-0.001	0.024	0.062	1.043	0.020	0.019	0.060	0.848	0.021	0.025
MEXICAN	0.221	2.750	0.226	0.082	0.134	2.027	0.134	0.066	0.136	1.866	0.164	0.088
P RICAN	0.246	3.419	0.304	0.089	0.240	3.753	0.257	0.069	0.174	2.352	0.226	0.096
CUBAN	0.251	3.755	0.365	0.097	0.256	4.234	0.291	0.069	0.186	2.689	0.271	0.101
P USE E	-0.224	-3.511	-0.082	0.023	-0.230	-3.919	-0.079	0.020	-0.230	-3.155	-0.088	0.028
MULT R		0.3574				0.3827				0.3529		

(DESIGN EFFECT = 3)

Mexican American parents of 13 year olds. Those parents did not rate the importance of their children speaking Spanish as highly as did Cuban and Puerto Rican parents of 13 year old children (Table 29, Appendix C).

Not surprisingly, there is also a significant negative relationship between parents use of English and their interest in the child maintaining his native language facility. That is, the less parents use English for everyday conversations, the more important it is for their children to develop fluency in the non-English language.

How Important is it that Children Retain Native Customs? This question was meant to tap the broader concept of assimilation into the majority culture. Inspection of Table 30 indicates that there are no significant differences between the Hispanic groups and the Asians, with the exception of Puerto Rican parents of children 9 and 13. Those Puerto Rican parents on average felt that it was more important to retain their customs than did the Asian group. Neither parent's education nor income showed a significant relationship with this reported "need to retain customs."

Parent's use of English was the one other significant relationship (negative) with this outcome -- that is, the more English the parent used the less likely were they to attach great importance to retention of customs. It would appear that the more "targeted" indicator of assimilation, "How important is it for children to learn to speak the non-English language of their parents?" leads to much greater Asian/Hispanic disparities than does the broader concept of retention of customs.

TABLE 30
DEPENDENT VARIABLE: "IMP CUST"
Q94. HOW IMPORTANT FOR CHILDREN TO RETAIN CUSTOMS OF ANCESTORS
1=NOT AT ALL ... 3=VERY IMPORTANT

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	0.056	0.874	0.074	0.085	0.027	0.442	0.035	0.079	-0.017	-0.239	-0.021	0.087
FATHER	-0.048	-0.835	-0.065	0.078	-0.002	-0.036	-0.003	0.072	-0.064	-1.101	-0.084	0.077
INCOME	0.014	0.197	0.005	0.023	0.007	0.121	0.003	0.021	0.025	1.010	0.024	0.024
PAR EDUC	0.108	1.491	0.044	0.030	0.054	0.856	0.024	0.028	0.009	0.123	0.004	0.029
MEXICAN	0.056	0.671	0.067	0.100	0.067	0.945	0.091	0.097	0.025	0.341	0.035	0.103
P RICAN	0.173	2.314	0.250	0.108	0.163	2.422	0.243	0.100	0.040	0.530	0.060	0.113
CUBAN	0.035	0.502	0.059	0.118	0.084	1.315	0.132	0.101	0.025	0.349	0.041	0.118
P USE E	-0.184	-2.768	-0.079	0.028	-0.192	-3.097	-0.091	0.029	-0.302	-4.047	-0.132	0.033
MULT R		0.2326				0.2237				0.2898		

(DESIGN EFFECT = 3)

Child's Language Competency

This section investigates the relationship of family demographics and home educational support variables to parent reports of their child's language competency in English and their non-English home language.

Read/Write in English

Table 31 presents the results of regressing the parent's perception of the child's competency in reading and writing in English on all the prior variables in the model for each of the three age groupings. Cuban parents felt that their children were more proficient in reading and writing in English than did Asian parents. Mexican American and Puerto Rican parents of 17 year olds also reported that their children were more proficient in reading and writing English than did their Asian counterparts. Parents whose children were not born in the United States felt that their children did not read or write English as well as those who were born here. Higher income families and better educated parents reported their children tended to read and write English better than the children of lower income and less well educated parents.

Parents of 13 and 17 year olds who felt that it was important for their children to learn to speak the home language also were more likely to report that their children read and wrote English well. The more

TABLE 31
DEPENDENT VARIABLE: "C R/W E"
Q19,20. HOW WELL DOES CHILD READ/WRITE ENGLISH (COMPOSITE)
1=NOT AT ALL ... 4=VERY WELL

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RIÇAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C HAT O	-0.129	-2.269	-0.227	0.100	-0.156	-2.775	-0.225	0.081	-0.177	-2.677	-0.234	0.087
FATHER	-0.069	-1.364	-0.127	0.093	0.028	0.593	0.044	0.074	0.017	0.331	0.025	0.076
INCOME	0.109	1.776	0.048	0.027	0.169	3.065	0.066	0.022	0.159	2.362	0.057	0.024
PAR EDUC	0.129	2.002	0.071	0.035	0.138	2.415	0.069	0.029	0.154	2.489	0.070	0.029
MEXICAN	-0.101	-1.362	-0.162	0.119	-0.016	-0.246	-0.024	0.099	0.134	2.020	0.206	0.102
P RICAN	0.041	0.607	0.079	0.130	0.062	0.987	0.104	0.105	0.186	2.734	0.307	0.112
CUBAN	0.151	2.426	0.344	0.142	0.177	2.989	0.315	0.105	0.223	3.479	0.412	0.118
P USE E	0.271	4.226	0.156	0.037	0.126	2.061	0.067	0.033	0.106	1.483	0.051	0.035
R TO ENG	0.059	1.030	0.095	0.092	0.012	0.213	0.017	0.081	0.068	1.094	0.094	0.086
ASK S HK	0.020	0.414	0.034	0.082	0.001	0.017	0.001	0.054	0.016	0.314	0.013	0.040
8 MEDIA	0.000	-0.009	0.000	0.041	0.080	1.682	0.061	0.036	0.058	1.109	0.047	0.042
IMP SP O	0.092	1.755	0.144	0.082	0.108	2.031	0.157	0.077	0.140	2.609	0.178	0.068
IMP CUST	0.029	0.585	0.039	0.067	0.003	0.066	0.003	0.052	-0.017	-0.317	-0.018	0.058
MULT R	0.5439				0.5017				0.5467			

(DESIGN EFFECT = 3)

English that parents used the more likely they were to report high proficiency for their child in reading and writing English.

When we look at the Hispanic group contrasts (Table 31, Appendix C), we see that Mexican American and Puerto Rican parents of 9 and 13 year olds are likely to rate their children's competence in reading and writing English lower than do Cuban parents.

Read/Write in Other Language

Table 32 presents the regression of reading/writing in the home language on all the prior variable for parents of children in the three age groups. With the exception of the Puerto Rican parents of 9 year olds, all the Hispanic parental groups report greater proficiency for their child to read and write their non-English language than do the Asian parents. Those parents of children in the age 13 or age 17 group who were born outside the United States also report greater proficiency in their children's ability to read and write in the home language, than do the parents of children who were born here. Not unexpectedly, parents who tend to use mostly English report that their children (age 9 and 13) are less likely to be proficient in reading and writing the other language. Similarly, parents of children who were read to in English tended to rate their child's literacy skills in the home language lower than parents of children who as youngsters were either read to in the native language or not read to at all.

In regard to differences among the Hispanic groups, we find that Cuban parents rate their child's ability to read and write in Spanish

TABLE 32
DEPENDENT VARIABLE: "C R/W O"
Q27,28. HOW WELL DOES CHILD READ/WRITE OTHER LANGUAGE (COMPOSITE)
1=NOT AT ALL ... 4=VERY WELL

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C HAT O	0.108	1.861	0.231	0.124	0.164	3.056	0.343	0.119	0.283	4.186	0.672	0.161
FATHER	0.035	0.682	0.078	0.115	0.027	0.604	0.066	0.109	0.030	0.558	0.078	0.139
INCOME	-0.013	-0.202	-0.007	0.033	0.066	1.252	0.040	0.032	-0.039	-0.561	-0.025	0.045
PAR EDUC	0.099	1.512	0.066	0.044	0.006	0.109	0.005	0.042	0.096	1.465	0.078	0.053
MEXICAN	0.264	3.518	0.517	0.147	0.190	3.086	0.448	0.145	0.145	2.148	0.402	0.187
P RICAN	0.127	1.859	0.300	0.161	0.268	4.463	0.687	0.154	0.144	2.072	0.427	0.206
CUBAN	0.333	5.287	0.928	0.176	0.425	7.495	1.158	0.154	0.289	4.408	0.959	0.218
P USE E	-0.255	-3.925	-0.179	0.046	-0.167	-2.854	-0.137	0.048	-0.083	-1.141	-0.072	0.063
R TO ENG	-0.182	-3.132	-0.358	0.114	-0.132	-2.499	-0.297	0.119	-0.164	-2.601	-0.412	0.159
ASK S WK	0.056	1.132	0.114	0.101	0.014	0.320	0.025	0.079	0.032	0.618	0.046	0.074
O MEDIA	0.012	0.226	0.011	0.051	-0.031	-0.685	-0.036	0.053	0.042	0.787	0.061	0.078
IMP SP O	0.021	0.402	0.041	0.101	0.057	1.198	0.136	0.113	0.119	2.177	0.272	0.125
IMP CUST	0.019	0.370	0.031	0.083	0.069	1.564	0.120	0.077	0.057	1.055	0.113	0.107
MULT R	0.5258				0.5580				0.5204			

(DESIGN EFFECT = 3)

higher than Mexican American and Puerto Rican parents rate their children's skills (Table 32, Appendix C).

Speaking and Understanding English

Table 33 presents the results of the regression of the child's proficiency in speaking and understanding English on all the prior variables. The results are virtually identical to those found when proficiency in reading and writing English was the outcome and thus will not be repeated here. Again, as with the previous earlier ratings of their children's language skills, Cubans tend to rate their children higher than do Mexican American and Puerto Rican parents (Table 33, Appendix C).

Speaking and Understanding Other Language

Table 34 suggests that only the Cubans consistently (i.e., in two out of three age groupings) report that their children speak and understand the home language better than the Asian children do their non-English language. Parents who frequently speak the other language feel that their children speak the home language well. It is also the case that children born outside the United States are more likely to be judged highly proficient in speaking and understanding the home language than are children who are natives of this country. Finally, children 13 and 17 who as preschoolers were read to in English are likely to be judged by their parents as less proficient in speaking and understanding the non-English language.

TABLE 33
DEPENDENT VARIABLE: "C S/U E"
Q18,19. HOW WELL DOES CHILD SPEAK/UNDERSTAND ENGLISH (COMPOSITE)
1=NOT AT ALL ... 4=VERY WELL

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	-0.202	-3.695	-0.299	0.081	-0.183	-3.329	-0.228	0.069	-0.215	-3.316	-0.263	0.079
FATHER	-0.088	-1.816	-0.136	0.075	-0.004	-0.085	-0.005	0.063	-0.003	-0.058	-0.004	0.069
INCOME	0.081	1.377	0.030	0.022	0.111	2.055	0.038	0.018	0.148	2.233	0.049	0.022
PAR EDUC	0.100	1.623	0.046	0.029	0.169	3.036	0.073	0.024	0.165	2.624	0.069	0.026
MEXICAN	-0.081	-1.143	-0.109	0.096	0.034	0.547	0.046	0.084	0.156	2.390	0.221	0.092
P RICAN	0.053	0.822	0.086	0.105	0.051	0.830	0.074	0.089	0.194	2.909	0.296	0.102
CUBAN	0.177	2.974	0.340	0.114	0.187	3.236	0.288	0.089	0.233	3.692	0.396	0.107
P USE E	0.266	4.337	0.129	0.030	0.185	3.095	0.086	0.028	0.095	1.361	0.043	0.031
R TO ENG	0.048	0.879	0.065	0.074	-0.003	-0.060	-0.004	0.069	0.066	1.083	0.085	0.078
ASK S HK	0.064	1.355	0.089	0.066	0.021	0.456	0.021	0.046	0.036	0.726	0.026	0.036
8 MEDIA	0.071	1.443	0.048	0.033	0.086	1.836	0.056	0.030	0.057	1.116	0.043	0.038
IMP SP O	0.098	1.965	0.130	0.066	0.108	2.241	0.146	0.065	0.094	1.784	0.110	0.062
IMP CUST	0.060	1.250	0.067	0.054	-0.010	-0.220	-0.010	0.044	-0.030	-0.587	-0.031	0.053
MULT R	0.5949				0.5327				0.5697			

(DESIGN EFFECT = 3)

TABLE 34
DEPENDENT VARIABLE: "C S/U O"
Q25,26. HOW WELL DOES CHILD SPEAK/UNDERSTAND OTHER LANGUAGE (COMPOSITE)
1=NOT AT ALL ... 4=VERY WELL

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	0.157	2.745	0.292	0.106	0.205	3.778	0.360	0.095	0.194	3.016	0.350	0.116
FATHER	-0.020	-0.403	-0.040	0.098	0.004	0.089	0.008	0.087	0.063	1.239	0.124	0.100
INCOME	-0.068	-1.111	-0.032	0.028	-0.045	-0.843	-0.021	0.025	-0.117	-1.787	-0.057	0.032
PAR EDUC	0.058	0.900	0.034	0.038	0.044	0.804	0.027	0.034	0.088	1.286	0.049	0.038
MEXICAN	0.107	1.443	0.182	0.126	0.085	1.369	0.160	0.117	0.022	0.348	0.047	0.135
P RICAN	0.065	0.965	0.133	0.138	0.093	1.528	0.189	0.124	0.038	0.578	0.086	0.149
CUBAN	0.205	3.276	0.493	0.150	0.231	4.041	0.501	0.124	0.105	1.691	0.266	0.157
P USE E	-0.379	-5.891	-0.230	0.039	-0.247	-4.184	-0.161	0.038	-0.304	-4.409	-0.202	0.046
R TO ENG	-0.066	-1.148	-0.112	0.098	-0.138	-2.588	-0.246	0.095	-0.181	-3.010	-0.344	0.114
ASK S HK	0.025	0.502	0.044	0.087	-0.058	-1.116	-0.071	0.064	0.047	0.962	0.051	0.053
8 MEDIA	-0.006	-0.119	-0.005	0.043	0.005	0.105	0.004	0.042	0.048	0.960	0.054	0.056
IMP SP O	-0.091	-1.729	-0.150	0.087	0.063	1.325	0.120	0.091	0.002	0.042	0.004	0.098
IMP CUST	0.036	0.717	0.051	0.071	0.033	0.742	0.046	0.061	0.028	0.544	0.042	0.077
MULT R	0.5382				0.5475				0.5840			

(DESIGN EFFECT = 3)

Once again Cuban parents of 9 and 13 year olds rate their children's skills in Spanish higher than do Mexican American and Puerto Rican parents. There were no differences in ratings between Mexican Americans and Puerto Ricans (Table 34, Appendix C).

Bilingual School Experiences

Two variables were used here: one concerned whether the children had any teachers at their current school who spoke their home language; the second identified whether the child had ever been taught in the non-English home language at school.

Teacher Speaks the Child's Language

Table 35 regressions investigate the relationship between demographics, parental attitudes and language proficiencies and whether or not the child has teachers who speak his non-English language. By far the largest effects are associated with the Hispanic subgroup contrast with the Asians. At all three age groups the Asians are much less likely to have a teacher who speaks their language than any of the Hispanic groups. It is interesting to note that while parent reports of the child's proficiency in reading and writing the non-English language

TABLE 35

DEPENDENT VARIABLE: "TCHRS LN"

Q52. DO ANY OF CHILD'S TEACHERS SPEAK THE NON-ENGLISH LANGUAGE
0=NO, 1=YES (=NO IF SKIPPED AND Q51=NO)

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	-0.006	-0.106	-0.007	0.066	0.035	0.604	0.034	0.057	-0.091	-1.275	-0.083	0.065
FATHER	-0.009	-0.167	-0.010	0.060	0.044	0.942	0.048	0.051	-0.056	-1.034	-0.056	0.054
INCOME	-0.068	-1.066	-0.019	0.017	-0.021	-0.370	-0.006	0.015	-0.044	-0.906	-0.016	0.017
PAR EDUC	-0.040	-0.589	-0.014	0.023	0.008	0.140	0.003	0.020	0.105	1.562	0.033	0.021
MEXICAN	0.345	4.385	0.345	0.079	0.383	5.853	0.402	0.069	0.295	4.204	0.310	0.074
P RICAN	0.288	4.088	0.346	0.085	0.372	5.762	0.426	0.074	0.335	4.638	0.380	0.082
CUBAN	0.311	4.591	0.441	0.096	0.409	6.374	0.497	0.078	0.388	5.399	0.481	0.089
P USE E	-0.092	-1.301	-0.033	0.025	-0.023	-0.375	-0.009	0.023	-0.076	-1.019	-0.025	0.025
R TO ENG	-0.072	-1.191	-0.072	0.061	0.014	0.256	0.014	0.056	0.077	1.173	0.073	0.062
ASK S WK	0.010	0.194	0.010	0.053	0.038	0.820	0.038	0.047	0.000	-0.005	0.000	0.029
B MEDIA	0.029	0.544	0.014	0.026	0.042	0.877	0.022	0.025	0.029	0.528	0.016	0.030
IMP SP O	0.053	0.975	0.052	0.053	0.041	0.825	0.044	0.053	-0.062	-1.094	-0.054	0.050
IMP CUST	-0.039	-0.756	-0.033	0.043	-0.040	-0.865	-0.031	0.036	-0.008	-0.154	-0.006	0.042
C R/H E	-0.060	-1.034	-0.038	0.036	-0.055	-1.090	-0.038	0.035	-0.049	-0.808	-0.034	0.042
C R/H O	0.171	2.971	0.087	0.029	0.184	3.480	0.082	0.024	0.112	1.877	0.043	0.023
MULT R	0.4953				0.4965				0.4973			

(DESIGN EFFECT = 3)

is significantly and positively related to this outcome, proficiency in English is not.[8]

Was Child Ever Taught in a non-English Language in School?

As Figure 1 indicates, there are two intermediate outcomes that deal with whether the child has had non-English language experiences at school. The first one simply asks if any of the child's present teachers spoke the home language. The second outcome, and the one being discussed here, asks if the child was ever taught in a non-English language. While this question is preferable to the one that simply asks if the child's teachers speak the other language, some children may have been instructed in their native language in schools outside the United States. It is hoped that this source of confounding may be partially controlled for since the regression equation includes child's place of birth.

The largest significant effects shown in Table 36 are ethnicity and the child's proficiency in reading and writing the non-English language. There are significant differences between all the Hispanic groups and the Asians for all age groups. The Hispanic groups are much more likely than the Asians to have been taught in their non-English language. Not surprisingly, reported proficiency in reading and writing in one's native language is positively related to the non-English

[8] From this point on, because of relatively high collinearities among the parental reports of the various kinds of language proficiencies, only the parents' ratings of their child's proficiency in reading and writing English and reading and writing the other language were kept in the analysis.

TABLE 36
DEPENDENT VARIABLE: "LM EVER"
QSS. HAS CHILD EVER TAUGHT IN NON-ENGLISH LANGUAGE AT SCHOOL
0=NO, 1 YES (=YES IF SKIPPED AND LM IS USED)

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C HAT 0	0.043	0.738	0.047	0.064	0.048	0.679	0.048	0.059	0.078	1.029	0.078	0.075
FATHER	-0.022	-0.435	-0.025	0.058	-0.028	-0.583	-0.031	0.053	0.000	-0.007	0.000	0.063
INCOME	-0.018	-0.297	-0.005	0.017	-0.127	-2.230	-0.035	0.016	-0.068	-0.908	-0.018	0.020
PAR EDUC	-0.040	-0.615	-0.014	0.022	-0.037	-0.625	-0.013	0.021	0.026	0.365	0.009	0.024
MEXICAN	0.318	4.168	0.318	0.076	0.267	4.035	0.290	0.072	0.177	2.399	0.205	0.086
P RICAN	0.242	3.542	0.291	0.082	0.205	3.126	0.242	0.077	0.174	2.290	0.217	0.095
CUBAN	0.241	3.678	0.343	0.093	0.308	4.723	0.386	0.082	0.197	2.655	0.274	0.103
P USE E	-0.078	-1.144	-0.028	0.024	-0.007	-0.106	-0.003	0.024	-0.040	-0.507	-0.015	0.029
R TO ENG	-0.022	-0.377	-0.022	0.059	-0.030	-0.525	-0.031	0.059	-0.054	-0.789	-0.057	0.072
ASK S HK	0.012	0.234	0.012	0.051	-0.003	-0.064	-0.002	0.039	-0.047	-0.851	-0.028	0.033
S MEDIA	0.002	0.031	0.001	0.026	0.041	0.829	0.022	0.026	-0.017	-0.300	-0.011	0.035
IMP SP 0	0.015	0.298	0.015	0.052	-0.067	-1.323	-0.074	0.056	-0.058	-0.964	-0.055	0.057
IMP CUST	-0.020	-0.394	-0.016	0.042	0.040	0.846	0.032	0.038	0.032	0.550	0.027	0.048
C R/W E	-0.107	-1.890	-0.067	0.035	-0.117	-2.270	-0.082	0.036	-0.076	-1.181	-0.057	0.049
C R/W 0	0.327	5.844	0.166	0.028	0.248	4.625	0.114	0.025	0.225	3.571	0.095	0.026
MULT R	0.5379				0.4751				0.4082			

(DESIGN EFFECT = 3)

language experience for all children. Proficiency in one's native language is a much more powerful predictor of the likelihood of instruction being conducted in the non-English language in school, than is one's lack of proficiency in English, which was only significant for thirteen year olds and just short of significance for nine year olds. It would appear that ethnicity and proficiency in one's home language are by far the best predictors of having school based instruction in the home language.

Achievement in School

Two achievement measures are used here. One is student grades as reported by the parents and the second is tested achievement as measured by the NAEP math assessment.

Grades in the Last Year

Table 37 presents the regression of achievement as measured by grades in the last year on all prior variables in the model. At age 9 the biggest effect on grades was the child's proficiency in reading and writing English. Literacy skill in the home language was also significant, but did not have as great an effect as literacy in English. The other significant positive effect relating to nine year olds was the contrast between Asians and Puerto Ricans and Cubans, with the Asians having significantly higher grades than these two Hispanic groups. At ages 13 and 17 the Asians parents reported significantly higher grades than those reported for all Hispanic groups. Having been instructed in the non-English language was not related to grade achievement.

TABLE 37
DEPENDENT VARIABLE: "GRADES"
Q31. CHILD'S GRADES DURING THE LAST SCHOOL YEAR
1=BELOW D ... 6=ALL A'S

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1803				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	-0.027	-0.457	-0.055	0.120	0.013	0.225	0.027	0.118	0.024	0.336	0.047	0.140
FATHER	0.009	0.166	0.018	0.110	0.066	1.388	0.146	0.106	0.016	0.301	0.035	0.116
INCOME	0.122	1.909	0.061	0.032	0.049	0.851	0.027	0.031	0.102	1.435	0.054	0.038
PAR EDUC	0.045	0.665	0.028	0.042	0.012	0.206	0.008	0.041	0.036	0.524	0.024	0.045
MEXICAN	-0.145	-1.798	-0.265	0.147	-0.318	-4.665	-0.679	0.146	-0.217	-3.042	-0.487	0.160
P RICAN	-0.173	-2.419	-0.381	0.158	-0.267	-3.999	-0.621	0.155	-0.287	-3.911	-0.694	0.178
CUBAN	-0.137	-1.986	-0.356	0.179	-0.301	-4.456	-0.741	0.166	-0.246	-3.424	-0.664	0.194
P USE E	0.059	0.845	0.039	0.046	-0.057	-0.893	-0.042	0.047	0.018	0.237	0.013	0.053
R TO ENG	0.016	0.267	0.030	0.111	0.019	0.325	0.038	0.116	-0.020	-0.296	-0.040	0.134
ASK S HK	-0.004	-0.086	-0.008	0.097	0.063	1.311	0.101	0.077	-0.049	-0.916	-0.057	0.062
# MEDIA	-0.054	-1.013	-0.049	0.048	-0.015	-0.301	-0.015	0.051	-0.008	-0.154	-0.010	0.065
IMP SP O	0.119	2.178	0.211	0.097	-0.067	-1.318	-0.145	0.111	0.085	1.478	0.158	0.107
IMP CUST	0.001	0.028	0.002	0.079	0.044	0.915	0.068	0.075	0.024	0.437	0.039	0.090
C R/W E	0.349	5.950	0.397	0.067	0.338	6.413	0.463	0.072	0.296	4.804	0.434	0.090
C R/W O	0.133	2.203	0.124	0.056	0.176	3.171	0.159	0.050	0.246	3.996	0.201	0.050
LM EVER	-0.050	-0.870	-0.092	0.105	0.021	0.407	0.041	0.100	0.010	0.178	0.019	0.109
MULT R	0.4996				0.4629				0.4890			

(DESIGN EFFECT = 3)

Tested Achievement in Mathematics

In this section some of the variables on the far right of Figure 1 were carried out on reduced samples. In particular, the use of mathematics scores as an outcome reduces the sample to parents from the NAEP sample only. In this case, age groups were pooled and only Asian and Mexican American ethnic contrasts were computed. Using the NAEP sample allows us to investigate the relationship between parent attitudes, behaviors, children's language proficiencies and tested achievement in mathematics.

Table 38 presents the regression of percent correct on the NAEP mathematics test on the prior variables in the model. Since the data were pooled across ages a dummy was also entered for age group membership. The largest effect was ethnicity -- Asian children's mathematics scores were significantly higher than those of the Mexican American children. The other significant explanatory variables in order of their importance were: the child's proficiency in reading and writing English, being a member of 17 year old group, parent education and family income. These latter four effects were all positive.

Having a teacher who speaks the home language showed no relationship with the NAEP tested outcome. After controlling for background, parent attitudes, and the parent's perception of child's language proficiency, there remains slightly more than one half a standard deviation difference between the Mexican Americans and the Asians on the mathematics scores. This is slightly more than the difference found in the earlier NAEP study (Baratz-Snowden et al., 1988), however, that study included a number of significant school

TABLE 38
DEPENDENT VARIABLE: "MATHXCOR"
STUDENT'S SCORE ON NAEP MATH TEST: PERCENT CORRECT
(ASIANS AND MEXICAN AMERICANS ONLY)

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN VS. ASIAN

AGES COMBINED

N = 1545

	BETA-WT	TSTAT	B-WT	ST ERR
C MAT O	0.040	0.732	1.774	2.424
FATHER	0.032	0.789	1.522	1.928
INCOME	0.103	2.121	1.295	0.611
PAR EDUC	0.113	2.107	1.659	0.788
MEXICAN	-0.259	-4.390	-11.253	2.563
P USE E	-0.026	-0.491	-0.440	0.896
AGE 13	0.032	0.684	1.443	2.109
AGE 17	0.154	3.001	7.156	2.385
R TO ENG	0.001	0.025	0.053	2.079
ASK S WK	0.018	0.445	0.588	1.305
B MEDIA	0.036	0.847	0.947	1.118
INP SP O	0.047	1.133	1.775	1.567
C R/W E	0.189	4.272	6.061	1.419
C R/W O	0.044	0.975	0.963	0.988
TCHRS LM	0.046	1.081	2.399	2.281

MULT R 0.5086

(DESIGN EFFECT = 3)

process variables including homework and courses taken that were not available in this analysis.

Language and Instructional Preferences of Parents

This section contains analyses describing parental preferences for the use of the non-English language in instruction of students who come from homes where a language other than English is spoken. In addition, parents were asked whether or not particular types of language programs -- bilingual maintenance, bilingual transition and bilingual immersion -- are desirable for children who speak a language other than English at home.

Instructional Preferences

Preference for Role of Other Language in Teaching Basics. This preference is coded "1" for English only, "2" for both English and the non-English language, and "3" for non-English only. Inspection of Table 39 indicates that Puerto Ricans and Mexican American parents are more likely to prefer programs with a heavier non-English component for teaching the basics such as math and science than are Asian parents. This preference is consistent and significant for all age groups. The Asian/Cuban contrast, however, is not significant on this outcome. Cuban parents of nine year olds are also less likely than Mexican American or Puerto Rican parents of 9 year olds to desire a non-English component in teaching the basics (Table 39, Appendix C).

TABLE 39
DEPENDENT VARIABLE: "PREF LM"
Q66. LANGUAGE PREFERENCE FOR TEACHING BASICS
1=ENGLISH ONLY; 2=BOTH; 3=LM ONLY

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1083				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	-0.006	-0.095	-0.007	0.071	0.017	0.262	0.017	0.066	-0.021	-0.282	-0.022	0.076
FATHER	-0.003	-0.061	-0.004	0.065	-0.012	-0.234	-0.014	0.059	0.003	0.054	0.003	0.063
INCOME	-0.136	-1.994	-0.038	0.019	-0.077	-1.238	-0.022	0.018	-0.161	-2.200	-0.045	0.021
PAR EDUC	0.069	0.958	0.024	0.025	-0.051	-0.795	-0.018	0.023	-0.055	-0.795	-0.019	0.024
MEXICAN	0.222	2.580	0.227	0.088	0.158	2.098	0.174	0.084	0.284	2.758	0.244	0.089
P RICAN	0.214	2.785	0.263	0.095	0.213	2.907	0.259	0.089	0.211	2.736	0.271	0.099
CUBAN	-0.017	-0.230	-0.025	0.107	0.076	1.024	0.098	0.096	0.075	1.007	0.108	0.108
P USE E	-0.085	-1.136	-0.031	0.027	0.067	0.984	0.026	0.027	-0.096	-1.251	-0.036	0.029
R TO EIG	-0.033	-0.507	-0.033	0.066	-0.089	-1.437	-0.094	0.065	-0.003	-0.048	-0.004	0.073
ASK S HK	0.036	0.671	0.039	0.057	0.049	0.959	0.042	0.043	-0.008	-0.140	-0.005	0.034
S MEDIA	0.010	0.184	0.005	0.029	0.032	0.596	0.017	0.029	-0.007	-0.132	-0.005	0.035
IMP SP O	0.106	1.826	0.106	0.058	0.072	1.307	0.082	0.062	0.058	0.991	0.058	0.058
IMP CUST	0.007	0.122	0.006	0.047	0.084	1.434	0.069	0.042	0.053	0.942	0.046	0.049
C R/W E	-0.007	-0.101	-0.004	0.042	-0.024	-0.405	-0.017	0.043	-0.047	-0.713	-0.036	0.051
C R/W O	-0.010	-0.161	-0.005	0.034	-0.004	-0.071	-0.002	0.029	0.003	0.040	0.001	0.028
LM EVER	0.159	2.587	0.162	0.063	0.035	0.635	0.036	0.056	0.041	0.706	0.042	0.059
GRADES	0.007	0.125	0.004	0.033	0.001	0.010	0.000	0.028	-0.069	-1.139	-0.037	0.032
MULT R	0.3978				0.3878				0.4528			

(DESIGN EFFECT = 3)

It is interesting to note that other things being equal, parents of nine year old children who had previous experience with non-English language programs were most positive about the use of non-English in instruction in basic subjects. Parents' judgments of their children's reading and writing proficiencies (English and non-English) were unrelated to their preference for use of the other language in teaching the basics.

Preference for Role of Other Language in Teaching Reading/Writing. Table 40 shows that all Hispanic parent groups are more likely to prefer programs with a heavier non-English language component than do Asian parents. For teaching reading and writing, the ethnic group contrasts are even more pervasive than in the case of basics. In addition, the Cubans are now also significantly more likely than the Asians to prefer the use of non-English in the teaching of reading and writing.

Again, the parents' preference for non-English instruction in reading and writing is not related to their child's skill level in reading and writing either language. Of note is the fact that parents' frequency of use of English is not related to preference here, but the importance they attach to their children learning the non-English language (for parents of nine and 13 year olds) is positively related to preference for use of non-English language in reading and writing instruction.

Program Preferences

As Figure 3 indicates, we used the background variables in our original model and the parental attitude variables that might be

TABLE 48
DEPENDENT VARIABLE: "PREF RW"
Q69. LANGUAGE PREFERENCE FOR TEACHING READING/WRITING
1=ENGLISH ONLY; 2=BOTH; 3=LM ONLY

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	AGE 9				AGE 13				AGE 17			
	N = 1003				N = 1223				N = 912			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	-0.063	-1.827	-0.065	0.063	0.004	0.062	0.004	0.059	-0.066	-0.896	-0.067	0.075
FATHER	0.016	0.308	0.018	0.058	-0.028	-0.573	-0.031	0.053	-0.031	-0.557	-0.034	0.062
INCOME	-0.112	-1.724	-0.029	0.017	-0.039	-0.664	-0.010	0.016	0.000	-0.005	0.000	0.020
PAR EDUC	0.004	0.065	0.001	0.022	-0.021	-0.349	-0.007	0.021	-0.083	-1.215	-0.029	0.024
MEXICAN	0.335	4.082	0.317	0.078	0.258	3.597	0.271	0.075	0.223	3.054	0.265	0.087
P RICAN	0.301	4.105	0.342	0.083	0.321	4.599	0.367	0.080	0.285	3.742	0.363	0.097
CUBAN	0.235	3.340	0.316	0.095	0.298	4.214	0.362	0.086	0.215	2.904	0.306	0.105
P USE E	-0.069	-0.968	-0.023	0.024	0.005	0.077	0.002	0.024	-0.087	-1.152	-0.033	0.028
R TO ENG	0.005	0.084	0.005	0.058	-0.023	-0.391	-0.023	0.059	0.009	0.128	0.009	0.072
ASK S HK	0.047	0.903	0.046	0.051	0.025	0.512	0.020	0.039	0.031	0.582	0.019	0.033
R MEDIA	0.025	0.460	0.012	0.025	0.058	1.159	0.030	0.026	-0.002	-0.045	-0.002	0.035
IMP SP O	0.144	2.587	0.133	0.051	0.140	2.677	0.150	0.056	0.044	0.785	0.045	0.057
IMP CUST	0.043	0.816	0.034	0.041	0.013	0.276	0.010	0.038	-0.008	-0.147	-0.007	0.048
C R/W E	0.019	0.297	0.011	0.037	-0.008	-0.146	-0.006	0.038	0.005	0.074	0.004	0.050
C R/W O	0.038	0.623	0.019	0.030	-0.026	-0.455	-0.012	0.026	0.050	0.784	0.022	0.027
LM EVER	0.098	1.581	0.093	0.058	0.070	1.338	0.067	0.050	0.107	1.879	0.109	0.058
GRADES	0.016	0.289	0.009	0.029	-0.002	-0.041	-0.001	0.025	-0.051	-0.848	-0.027	0.031
MULT R	0.4823				0.4270				0.4748			

(DESIGN EFFECT = 3)

considered to affect parent attitudes about language programs -- the importance of retaining native customs, the importance of speaking the home language, and the importance of all children learning a non-English language -- as intermediate variables in determining factors associated with parent preference for bilingual maintenance, bilingual transition and bilingual immersion programs. In this analysis the sample was randomly divided in thirds, with each third expressing an opinion as to the value of one of the programs.

Table 41 presents the data on parental preference for providing each program type for children who speak a language other than English. Only ethnicity appeared to be significantly associated with parental choice.

Bilingual Maintenance. As the descriptive findings indicated, a majority of the respondents were in favor of such a program for teaching children who speak a non-English language -- 55 to 85% depending on ethnic group. The relational analysis revealed that there were no differences between Cuban and Asian parents in the strength of their approval of such programs, but Mexican American and Puerto Rican parents were more likely than Asian parents and Cuban parents (Table 41, and Table 41 Appendix C) to believe that a bilingual maintenance program was good for language minority children. Table 41, Appendix C further indicates that there were no differences between Mexican American and Puerto Rican parents regarding this program.

Transitional Programs. As with bilingual maintenance, the descriptive results indicated considerable support for these programs -- 65 to 88% depending on ethnic group. The relational findings are

TABLE 41
DEPENDENT VARIABLE: "GOOD PRG"
Q73. THINK THIS WOULD BE A GOOD PROGRAM FOR STUDENTS WHO DON'T SPEAK ENGLISH
0=NO, 1=YES

ETHNIC GROUP CONTRAST: MEXICAN AMERICAN, PUERTO RICAN, AND CUBAN VS. ASIAN

	BILINGUAL N = 1051				TRANSITIONAL N = 996				IMMERSION N = 1089			
	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR	BETA-WT	TSTAT	B-WT	ST ERR
C NAT O	0.046	0.699	0.041	0.058	0.027	0.401	0.021	0.053	0.001	0.013	0.001	0.057
FATHER	-0.058	-1.091	-0.057	0.053	-0.052	-0.919	-0.046	0.050	-0.001	-0.014	-0.001	0.052
INCOME	-0.105	-1.613	-0.025	0.015	-0.054	-0.766	-0.011	0.015	0.064	0.945	0.015	0.016
PAR EDUC	-0.058	-0.865	-0.017	0.020	-0.019	-0.271	-0.005	0.019	-0.114	-1.646	-0.033	0.020
MEXICAN	0.193	2.574	0.182	0.071	0.185	2.293	0.150	0.065	-0.157	-1.978	-0.139	0.070
P RICAN	0.199	2.733	0.208	0.076	0.168	2.100	0.154	0.071	-0.108	-1.455	-0.112	0.077
CUBAN	0.023	0.341	0.027	0.078	-0.015	-0.215	-0.016	0.076	-0.097	-1.348	-0.108	0.080
P USE E	-0.067	-1.045	-0.021	0.021	-0.067	-0.934	-0.019	0.021	-0.013	-0.186	-0.004	0.022
AGE 13	0.043	0.717	0.039	0.054	-0.045	-0.704	-0.035	0.050	0.022	0.342	0.019	0.054
AGE 17	-0.028	-0.464	-0.027	0.058	-0.048	-0.748	-0.041	0.055	0.041	0.641	0.038	0.059
IMP SP O	0.080	1.421	0.070	0.050	0.025	0.489	0.020	0.048	0.043	0.716	0.037	0.051
IMP CUST	0.059	1.103	0.043	0.039	0.026	0.453	0.016	0.036	-0.028	-0.505	-0.019	0.038
TCH ALL	0.049	0.894	0.063	0.070	0.058	1.029	0.068	0.066	-0.004	-0.072	-0.005	0.069
MULT R		0.3628				0.2824				0.1647		

(DESIGN EFFECT = 3)

identical with those regarding the bilingual maintenance programs, that is, Mexican American and Puerto Rican parents are in greater support of such efforts than are the Asian parents (Table 41) and Cuban parents (Table 41, Appendix C). There were no significant differences between Cuban and Asian parents with respect to preference for transitional programs; nor between Mexican American and Puerto Rican parents.

Immersion Programs. Support for these programs, as revealed in the descriptive section, ranged from 66% to 81%. After holding other variables constant, we found no significant differences in parental preference for these programs between Asian parents and Mexican American and Cuban parents, however, Puerto Rican parents were less supportive of these programs than the Asian parents.

Language Competence of Child and Parent Program Preference. We asked the parents if the program that they indicated was good for language minority children in general was one that they would like for their child. Table 42 indicates the relationship between Asian and Hispanic parents' desire for their child to receive a particular bilingual program and their assessment of their child's ability to read and write English.

Not surprisingly, the data indicate the less competence parents report in their child's ability to read and write English the more likely they are to indicate that they want their child in a special language program. But, there are important differences between Asians and Hispanics in the relationship of the child's reading and writing skills and the desirability of particular programs. Asian parents who believed their children had good English literacy skills were less

Table 42

PERCENT OF PARENT PREFERENCES FOR THEIR CHILD TO RECEIVE SPECIAL PROGRAM BY PARENT REPORTS OF CHILD'S COMPETENCY IN READING/WRITING ENGLISH

Special Program	Rating of English Literacy	Asian	Hispanic
BILINGUAL	Very Well	16%	50%
	Pretty Well	31%	58%
	Not At All	54%	77%
TRANSITIONAL	Very Well	15%	40%
	Pretty Well	37%	59%
	Not At All	55%	77%
IMMERSION	Very Well	29%	40%
	Pretty Well	51%	53%
	Not At All	79%	69%

likely than Hispanics to want their children in any program. Furthermore, the Asian parents with children with limited English literacy skills are more likely to prefer that their children be in an immersion program than in the other types of bilingual programs.

The Hispanic parents, even if their children read English very well, are much more likely to prefer that their children be in a language program. This phenomenon is especially true for the bilingual program and is consistent with earlier findings in these analyses of Hispanic parents' belief in the importance of their children knowing the home language well, and of their desire for the school to take an active role in developing home language skills.

Summary of The Relational Analysis Results

The most striking finding of the relational analysis was the consistent and, compared to all other variables used in the model, overwhelming role of ethnicity in association with parent preferences.

- o In regard to the importance of their child's learning the home language, Hispanic parents were more likely than Asian parents to desire this outcome, with one exception, Mexican American parents of high school students.

- o In regard to the use of the non-English language in teaching basic subjects such as math and science, Puerto Rican and Mexican American parents were more likely to desire this outcome than Asian parents.

- o In regard to the use of the non-English home language for teaching English reading and writing skills, all Hispanic groups were more likely to desire this instructional strategy than were Asian parents.

o In regard to the desirability of bilingual maintenance programs for children who come from homes where a language other than English is spoken, Puerto Rican and Mexican American parents were more likely than Asian or Cuban parents to desire such a program.

o In regard to the desirability of transitional bilingual program for children from non-English speaking backgrounds, once again Puerto Rican and Mexican American parents were more likely than Asian or Cuban parents to find such programs attractive.

o In regard to immersion programs, once again we find that Puerto Rican parents differ from Asians. This time, however, Puerto Rican parents found immersion program less attractive for teaching children from non-English speaking homes than did Asian parents. There were no significant differences between Asian parents and Mexican American or Cuban parents on the desirability of immersion programs.

Surprisingly, when we control for the other variables used in this study, such as, 1. education level, 2. family income, 3. parent or child language skills or language use, 4. children's experience with special language programs and 5. achievement, we find that the pattern of association between ethnic difference and parental preference for the use of the home language in instruction remains. In addition, none of those other variables appeared to have a strong relationship with parental preference when ethnicity is taken into account. These findings were replicated when we looked at preferences for types of programs and background characteristics and attitudes towards the importance for children to know and retain the non-English language and the customs of their ancestors.

There were some significant relationships between some of these other background and process variables on intermediate outcomes, but even on those outcomes the ethnic differences tended to predominate.

CHAPTER SIX -- DISCUSSION AND CONCLUSIONS

Although there are differences in degree depending on the program or the instructional strategy, the results of this study clearly indicate that all groups -- Asians, Cubans, Puerto Ricans and Mexican Americans -- support efforts at providing special language services to students who come from homes where a non-English language is spoken. Regardless of parent attitudes towards the importance of their child speaking the home language well, or their perception of the role of the school in teaching the non-English language, all parents assign high importance to their children learning English.

Parents support bilingual education in its most generic sense -- giving extra help to students in order to facilitate their learning English -- but do not go much beyond that in differentiating among types of bilingual programs. It would appear from the parents' perspective the most important issue is that language minority children learn English and that such children be given the necessary special services, whatever kind, to achieve that end. The need for special services, not the particulars of the educationists' debate concerning the best type of bilingual program for learning English, seems to motivate their decisions.

Strong support for bilingual maintenance programs from certain ethnic groups appears to be motivated by desires for sub-group language and cultural maintenance at least as much as by beliefs about the

effectiveness of such programs to teach English skills. For example, Cuban parents who are strong supporters of bilingual maintenance education also tend to rate highly their children's proficiency in English, to value their children's ability to speak the home language and to view the school as responsible for teaching about the home language and culture.

The dominance of the goal for learning English over secondary concerns about the strategies for achieving that goal is not surprising given the fact that many parents are uninformed about particular school practices and policies on the one hand and the demonstrated relationship of language proficiency to achievement on the other. While ethnicity was related to grades in school and tested achievement, so too were parents' assessments of their child's proficiency in reading and writing English. In addition, ratings of children's proficiency in reading and writing the home language had a significant positive effect on grades in school. Language skill was important to achievement, but whether or not the student had ever been taught in a non-English language was not.

While there is broad support for bilingual programs, the data indicate that there are large and pervasive differences among the ethnic groups in terms of the level of their support for certain programs and instructional strategies even after demographic and other background and process factors have been controlled. Asian parents are generally less enthusiastic than Hispanic parents concerning the use of their non-English language in their children's schooling. Even though more than 50% of the Asian parents supported maintenance or transitional bilingual education programs, they are less likely than Mexican American and

Puerto Rican parents to find a maintenance or transitional bilingual program attractive as an approach to teaching children who don't speak English. Furthermore, Asian parents are more predisposed to immersion programs for non-English speaking children than they are to other kinds of bilingual programs.

Mexican American and Puerto Rican parents tended generally to be slightly more supportive of programs that use non-English instructional strategies. Indeed, Puerto Rican parents were less supportive of immersion programs as an appropriate strategy for teaching English to children from non-English speaking homes than were all other groups.

Although Cubans were most desirous of their children learning the Spanish language well, they were also less enthusiastic than Mexican Americans and Puerto Ricans for the use of Spanish in teaching children to read and write English, and in teaching children the basic courses such as mathematics or science. It may be that they felt the use of Spanish was less necessary since they were more likely than those other Hispanic groups to rate highly their children's competence in Spanish.

The findings from this study tended to corroborate earlier research concerning the minor role demographic factors other than ethnicity play in determining language preference. As with Cole's research, this study also found that in general Hispanic parents' instructional preferences in regard to the use of non-English language were only minimally related to their perception of their children's linguistic skills. Three things may be operating here. First, many of the questions referred in general to "children who come from homes where a non-English language was spoken" and so parents may have been

responding to the needs of children who did not speak English rather than to their own children the overwhelming majority of whom were rated as speaking English "very well" or "pretty well." And second, Hispanic parents were in favor of the importance of their children knowing the Spanish language well, and thus programs that used that language would be seen as positive. A third possibility is the fact that if their child spoke Spanish well, it might seem to parents that it would make common sense to use that strength in the teaching process.

While limitations in the data set, particularly in regard to the fact that many parents were unable to specify language policies and practices in their children's schools, caution against overgeneralizing the findings, two clear policy implications emerge from this study. First, parents believe that special language programs should be available for language minority children. Asian, Mexican American, Puerto Rican and Cuban parents are all overwhelmingly in favor of some kind of special language services for students who don't speak English.

Second, while parents support the needs for special language programs for language minority children, there is a diversity of opinion both within and among ethnic groups as to what are the most desirable instructional practices. Thus, to the extent that schools attend to parent preferences in their program development, it would appear that this study would call for some options in the types of special services available to language minority children.

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APPENDIX A

SAMPLING & WEIGHTS

1. Sample Design

The PPS was restricted to 28 of the 94 NAEP language minority (LM) PSU's. These PSUs were purposively selected to represent about 75 percent of the Puerto Ricans in the LM population, 60 percent of the Mexican-Americans, 78 percent of the Cubans, and 67 percent of the Asians. In other words, the strata represented by the 28 PPS PSUs account for these percentages of the ethnic populations of interest .

The schools identified to participate in the PPS were all NAEP LM schools in the 28 PPS PSUs where LM assessments were expected (at the time when the sampling worksheets, to be used by the supervisors for the within-school sampling were produced). In most cases, the determination of whether LM assessments were expected in a school was based on the ethnic breakdown shown in the NAEP Principal's Questionnaire. In a few schools where NAEP and LM assessments were expected, no LM assessments were conducted since the NAEP sample sizes had to be satisfied before students became available for LM assessments. These schools became ineligible for the PPS.

The sample of PPS schools initially included 400 schools out of which 164 were 9-year-old schools, 119 13-year-old schools, and 117 17-year-old schools. In these schools, the NAEP supervisor described to the school principal the objectives and requirements of the PPS and requested the school's cooperation in the survey. Table 1 shows the distribution of schools by PSU, age class, and disposition code. In PSU 231 the Dade County public school district refused to participate in the PPS. Thus, 37 of the refusals were district refusals. In PSUs 106, 107, and 108, the New York public school district agreed to participate in a modified way; that is, the district sent to the parents of students identified as eligible for the PPS a letter requesting they send their name and address to Westat. In these schools 16 percent of parents of eligible students returned name and address information.

To be considered eligible for the PPS, a student must have been assessed using an language minority booklet for any of the three NAEP age/grade classes or must have been sampled for language minority but excluded from the assessment because of limited English proficiency. In addition, a student must have identified his/her ethnicity as Mexican, Puerto Rican, or Cuban in question 2 of the LM booklet and must have mentioned in question 3 that a language other than English is spoken in his or her home (any category other than "never"). For excluded students, the Excluded Student Questionnaire does not distinguish between the different Hispanic subgroups so "other" Hispanics, although not an eligible subgroup for the PPS, were also brought into the sample. During the interview 46 such students were identified and excluded from the weighting.

At the point in time when losses due to Dade County school district refusal, the New York special procedure, and a lower than anticipated school cooperation rate were recognized, it was decided not to subsample within PPS cooperating schools until after the NAEP/LM assessments were completed. The yield of eligible PPS students was then evaluated and Mexican Americans were subsampled in schools where more than 10 Mexican American PPS eligibles were identified. The subsampling rate in these schools was established to yield an expected 1,000 completed interviews with Mexican-American parents.

After eliminating duplicate records (parents that had more than one child in the LM sample) and subsampling Mexican-Americans, a survey control file was prepared consisting of 3,577 cases. These parents were contacted by telephone or in person and the results of contacts are summarized in Table 2 by age-class, ethnicity, and disposition code. Cases assigned a disposition code of "other" (30) are parents who reported an ethnicity other than Cuban, Puerto Rican, Mexican-American or Asian or who do not speak a language other than English in the home. These cases were classified as ineligible and not included in the weighting.

2. Weighting Operations

Once the LM weight file (LM assessed and LM excluded) was prepared and all cases on the PPS survey control file were assigned disposition codes, the two files were merged. In this process 191 completed eligible cases were not matched to the LM weight file. After some investigation, reasons were found for the nonmatches. Most of these cases were not sampled for LM but were included in the PPS sample by mistake. The distribution of these cases by reason and ethnicity are shown below.

Reason for Ineligibility	Asian	Cuban	Mexican	P. R.	Total
Invalid ID*	14	1	19	10	44
Spiral assessed	2	0	0	1	3
Spiral excluded	45	0	83	3	131
Tape assessed	0	0	0	1	1
Tape excluded	4	0	8	0	12
All ineligible	65	1	110	15	191

*These cases had IDs that did not match any ID on the NAEP files, probably because of coding error. They were declared out-of-scope and are not included in the PPS weights file.

The basic weight associated with a parent questionnaire or a student LM booklet in the PPS is the LM final weight appearing on the LM weight files Westat delivered to ETS. This final weight, however, must be adjusted to take into account subsampling and losses specific to the PPS.

The first weight adjustment to the basic PPS weight accounts for the subsampling of students (Mexican Americans) from the original school lists of PPS eligibles. Next, to account for PPS school nonresponse (schools that participated in NAEP/LM but refused participation in the PPS), schools were grouped into 15 nonresponse adjustment classes as shown below and a nonresponse adjustment factor was computed within each cell.

Nonresponse class	Age class	PSU type	Eligible (Ei)
1 2 3	9 13 17	103-117	Hispanics and Asians
4 5 6	9 13 17	231	Hispanics
7 8 9	9 13 17	339,380	Hispanics and Asians
10 11 12	9 13 17	452,454, 483,487	Hispanics
13 14 15	9 13 17	Other 400 PSU's	Hispanics and Asians

The school nonresponse adjustment factor inflates the PPS weight so that the estimated number of PPS eligibles in cooperating schools within an adjustment cell -- using the LM school weight W_s-- equals the estimated number of eligibles in all PPS schools (cooperating and refusing). That is, the nonresponse adjustment factor fl_c is given by:

$$fl_c = \frac{\sum_{s \in A_c} W_s E_s}{\sum_{s \in R_c} W_s E_s}$$

where

c = class defined by age class and type of PSU as indicated above;

R_c = cooperating PPS schools in class c (school disposition = 11);

A_c = all eligible schools in class c; and

E_s = PPS eligibles in the school as defined above.

For PSU 231, this adjustment factor does not account for the Dade County district refusal.

To account for student/parent nonresponse, separate adjustment factors were computed for each cell defined by age class (9's, 13's and 17's), PSU, and household type (Hispanic or Asian). Since the adjustment was carried out within PSU most Hispanics in a given PSU are of one of the three Hispanic subgroups under study. The student nonresponse adjustment factor, $f2_s$, inflates the estimated PPS eligibles represented by the cooperating students/parents to the total number of eligibles in the PPS universe. This adjustment factor is given by:

$$f2_c = \frac{\sum_{i \in A_c} W_i'}{\sum_{i \in R_c} W_i'}$$

where

c = class defined by age class, PSU, and household type;

R_c = cooperating parent in adjustment class c (disposition = 11);

A_c = all eligible parents in class c; and

W_i' = LM weight adjusted for PPS subsampling and school nonresponse associated with student/parent i.

In the New York PSUs, however, the student/parent nonresponse adjustment does not account for the losses due to parents who did not fullfill the school district's request to send their name and address to Westat.

The final PPS weight ($W_i'' = W_i' f2_i$), the basic PPS weight adjusted for PPS subsampling, PPS school nonresponse and interview nonresponse, is the one that appears on the PPS weights file and is to be used for all PPS analyses whether it is student LM data or parent data.

Table 1.- Results of Contacts for PPS Schools

PSU code	PSU description	School dispositions														
		Cooperating Schools			Cooperating percent				Noncooperating schools			Total eligible				Out-of-scope
		9's	13's	17's	9's	13's	17's	All	9's	13's	17's	9's	13's	17's	All	All
103	Boston SMSA	1	1	2	100%	50%	100%	80%	0	1	0	1	2	2	5	0
106	Bronx, New York, NY	7	4	7	78%	80%	100%	86%	2	1	0	9	5	7	21	5
107	Kings (Brooklyn), NY	10	6	10	100%	100%	100%	100%	0	0	0	10	6	10	26	6
108	Queens,Westchester,NY	8	6	7	100%	100%	100%	100%	0	0	0	8	6	7	21	3
110	Union City, NJ	3	0	0	100%	0%	0%	50%	0	1	2	3	1	2	6	1
111	Middlesex, NJ	0	1	0	0%	50%	-	20%	3	1	0	3	2	0	5	1
112	Camden, NJ-Philadelphia, PA	2	3	5	100%	75%	100%	91%	0	1	0	2	4	5	11	1
117	Washington D.C. SMSA	0	2	3	0%	100%	100%	63%	3	0	0	3	2	3	8	1
231	Miami-Ft. Lauderdale, FL*	2	5	1	67%	100%	33%	73%	1	0	2	3	5	3	11	0
339	Cook/Dupage, IL	5	1	5	83%	100%	83%	85%	1	0	1	6	1	6	13	1
380	Kane/Kendall, IL	0	1	0	0%	50%	0%	13%	3	1	3	3	2	3	8	0
450	Dallas SMSA	3	2	3	100%	100%	100%	100%	0	0	0	3	2	3	8	0
451	Houston SMSA	6	3	3	100%	75%	75%	86%	0	1	1	6	4	4	14	0
452	Chavez/Otero, NM	6	1	2	86%	33%	67%	69%	1	2	1	7	3	3	13	2
454	Los Alamos, McKinley, NM	2	2	0	100%	100%	-	100%	0	0	0	2	2	0	4	0
456	San Diego SMSA	2	1	1	67%	25%	50%	44%	1	3	1	3	4	2	9	1
457	Orange County, CA	4	1	2	100%	33%	67%	70%	0	2	1	4	3	3	10	1
458	Los Angeles, CA	18	8	9	95%	89%	100%	95%	1	1	0	19	9	9	37	3
459	Ventura County CA	0	0	1	0%	0%	33%	20%	1	1	2	1	1	3	5	0
460	Santa Clara (San Jose), CA	3	3	2	100%	100%	100%	100%	0	0	0	3	3	2	8	3
461	Sacramento SMSA, CA	6	4	4	75%	100%	100%	88%	2	0	0	8	4	4	16	0
463	Pierce (Seattle), WA	4	3	2	100%	100%	67%	90%	0	0	1	4	3	3	10	0
483	Nueces, San Patricio, TX	4	3	2	100%	100%	100%	100%	0	0	0	4	3	2	9	1
487	Taos, NM	10	9	4	77%	100%	100%	88%	3	0	0	13	9	4	26	0
490	Riverside/San Bernardino, CA	2	3	1	100%	100%	50%	86%	0	0	1	2	3	2	7	0
492	Fresno, CA	3	2	3	100%	100%	75%	89%	0	0	1	3	2	4	9	0
493	Alameda (Oakland), CA	2	3	2	100%	100%	100%	100%	0	0	0	2	3	2	7	1
494	San Francisco, San Mateo, CA	3	1	1	100%	100%	100%	100%	0	0	0	3	1	1	5	0
All	All PSUs	116	79	82	84%	83%	83%	83%	22	16	17	138	95	99	332	31

Table 2. Results of parent contacts by age class, disposition, and ethnicity

Ethnicity	Cooperating Parents				Noncooperating (codes 21 to 28)				Eligibles			Response Rt				Inelig.	Out-of Scope
	9's	13's	17's	All	9's	13's	17's	All	9's	13's	17's	9's	13's	17's	All	(30s)	(39s)
Asian	213	342	367	922	24	49	63	136	237	391	430	90%	87%	85%	87%	9	80
Mexican American	445	414	249	1108	n/a	n/a	n/a	n/a								n/a	n/a
Cuban	39	31	91	161	n/a	n/a	n/a	n/a								n/a	n/a
Puerto Rican	105	110	99	314	n/a	n/a	n/a	n/a								n/a	n/a
All Hispanic	589	555	439	1583	128	98	95	321 0	717	653	534	82%	85%	82%	83%	335	191
All Parents	802	897	806	2505	152	147	158	457	954	1044	964	84%	86%	84%	85%	344	271

* The response rate excludes ineligibles and out-of-scope; that is RR = cooperating/(cooperating+noncooperating)

1. Sample Selection

For the PPS supplemental sample a sample of pages was selected from the White Pages of Dade County, Bronx, Queens, King and Manhattan. Pages were selected systematically and on each sampled page two columns were randomly drawn into the sample. In the Dade White Pages each page consisted of four columns while in the New York counties each page consisted of five columns. The table below shows the number of pages in each directory and the number of pages sampled in each county (borough).

County	Pages on the directory	Pages sample
Dade	1,373	200
Bronx	495	100
King	1,058	250
Queens	1,118	200
Manhattan	1,633	240

To select the listings to be drawn into the sample, clerks went through the telephone listings on the sample columns and identified surnames that matched surnames on the Census Bureau's list of Hispanic surnames. Others surnames that I recognized as common Cuban or Puerto Rican surnames were also drawn into the sample. It should be noted that White Pages in the Manhattan boroughs as well as in Dade County include commercial listings . Consequently, even if the proportion Hispanic were the same in all four areas, the yield of noncommercial Hispanic surnames in Manhattan and Miami would be lower than in Bronx, Queens, and King.

After Hispanic names were identified, the sample pages for each county were systematically divided into subsets to be released as needed to meet the target number of completed questionnaires by county. Clearly, some pages had no Hispanic surnames and in some pages only one of the two columns had Hispanic surnames. Thus, the number of Hispanic listings varied among of the subsets although they originally consisted of the same number of pages.

Before assigning a unique sequence number to the Hispanic listings within each county, a check of the listings was made to insure that commercial listings appearing in the White Pages, such as MDs, attorneys, realtors, etc., had been excluded. Also, a random number between 1 and 3 was associated with every listing to indicate the program number to be used (to administer questions 73-75) if the listing turned to be an eligible Cuban or Puerto Rican household. Table 1 shows the number of listings contacted in each county and the results of contact.

2. Weighting

Since the sampling was carried out independently within each county, the completed cases in each county have their own weight, as shown below. The basic weight associated with a household in a given county is the reciprocal of its probability of selection. The final weight is the basic weight adjusted for screening nonresponse and interview nonresponse using the adjsutment factors shown below.

County	Screener nonresponse adjustment	Interview nonresponse adjustment	Final weight
Dade	1.54	1.23	40.128
Bronx	1.56	1.22	58.965
King	1.55	1.30	21.359
Queens	1.44	1.30	52.243
Manhattan	1.46	1.25	62.152

Evaluation of Asian Estimates for the PPS

ASIAN Population for PPS includes parents of students in eligible grades/ages, in the areas represented by the 28 PSUs in the PPS sample, who speak a language other than English and identify their race/ethnicity as Asian

Estimated US Asian Students per 1980 Census = 606,000 students
Coverage by the 28 PSU sample = 70 %
Estimated Asian students per grade within covered area = .7 x (606,000 /12) = 35,350
Proportion who speak a language other than English in the home = .90
Estimated Asian parents represented by the PPS = .90 x 35,500 = 31,950 students
Loss due to undercoverage by LM probe approximately = 30 %
Expected PPS estimate = .70 x 31,950 = 22,365

	9's/3rd	13's/7th	17's/11th
Weighted PPS Estimate	27,528	28,799	28,703
Expected PPS Estimate	22,365	22,365	22,365

Possible reasons that would account for difference between expected and acual estimates:

Population growth
Sampling error
Poor estimate of undercoverage or proportion who speak a language other than English
Misclassification

WESTAT IMPLEMENTATION

Evaluation of Mexican American Estimates for the PPS

MEXICAN AMERICAN Population for PPS includes parents of students in eligible grades/ages, in the areas represented by the 28 PSUs in the PPS sample, who speak a language other than English, and identify their race/ethnicity as Mexican American

Estimated US Mexican American students 7 to 17 years per Census
1986 Hispanic population estimates = 2,688,000 students
Coverage by the 28 PSU sample = 60 %
Estimated Mex. Amer. students per grade within covered area = .60 x 2,688,000 /12) = 134,400
Proportion who speak a language other than English in the home = .80
Estimated Mex. Amer. parents represented by the PPS = .80 x 134,400 = 107,520 students
Loss due to undercoverage by LM probe approximately = 40 to 60 %
Expected PPS estimates = .40 x 107,520 = 43,000 and .60 x 107,520 = 64,512

	9's/3rd	13's/7th	17's/11th
Weighted PPS Estimate	94,484	73,318	33,408
Expected PPS Estimate	64,512	64,512	43,000

Possible reasons that would account for difference between expected and acual estimates:

- Sampling error
- Poor estimate of undercoverage or proportion who speak a language other than English
- Misclassification
- Higher drop-out rate for Mexican Amercians in higher grades

Evaluation of Puerto Rican Estimates for the NAEP PPS

PUERTO RICAN Population for PPS includes parents of students in eligible grades/ages, in the areas represented by the 28 PSUs in the PPS sample, who speak a language other than English and who identify their race/ethnicity as Puerto Rican

Estimated US Puerto Rican students 7 to 17 years per CPS
1985 report on Hispanic population = 548,000 students
Coverage by the 28 PSU sample = 75 %
Estimated Puerto Rican students per grade within covered area = .75 x(548,000 /12) = 34,250
Proportion who speak a language other than English in the home = .70
Estimated Puerto Rican parents represented by the PPS = .70 x 34,200 = 23,900 students
Loss due to undercoverage by LM probe approximately = 50 to 60 %
Expected PPS initially = .50 x 23,900 = 11,900(for 9'1 and 13's)
and .60 x 23,900 = 14,380 (for 17's)
Undercoverage of the NAEP sample because of procedure required by the New York School District= 55% loss for 9's and 13's and 60% loss for 17's
Expected after loss of NY: .45X11,900=5,350; .45X11,900=5,350; .40X14,380=5,400

		9's/3rd	13's/7th	17's/11th
Weighted PPS Estimate	NAEP	4,463	2,930	4,560
Expected PPS Estimate		5,350	5,350	5,750

146 Possible reasons that would account for difference between expected and acual estimates:
Poor estimate of undercoverage or proportion who speak a language other than English
Sampling error

147